

**FOURTH SEMESTER M.Sc. FOOD SCIENCE AND TECHNOLOGY
DEGREE EXAMINATION, JUNE 2018**

(CUCSS)

FT 4E 26—DAIRY TECHNOLOGY

(2014 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

*Answer any fourteen questions.
Each question carries 1 weightage.*

1. _____ is used to find the specific gravity of milk.
2. pH of standardized milk is _____.
3. Fat percentage in toned milk is _____.
4. Clarification in milk is used for _____.
5. Pasteurized milk is stored at _____°C.
6. Evaporated milk is used for _____.
7. Name the equipment used to separate cream from milk.
8. Fat percentage in ice cream is _____.
9. What are the classifications of cheese ?
10. What is skimmed milk ?
11. Fat content in butter must be _____ level.
12. Incorporation of air in ice cream is known as _____.
13. Frozen milk products are stored at _____°C.
14. The fat percentage in butter milk is _____.
15. In CIP, _____ chemical is used.
16. Nutritive value of khoa is influenced by _____.
17. Channa is a fermented milk products. (*true / false*).

(14 × 1 = 14 weightage)

Turn over

Part B

*Answer any seven questions.
Each question carries 2 weightage.*

18. How the platform test is carried out ?
19. Discuss the theories of churning.
20. Write a note on cleaning of dairy equipments.
21. Give the composition and standards of ice cream.
22. Draw the flow chart for the preparation of vegetable toned milk.
23. Differentiate between pasteurization and sterilization.
24. Give the flow chart for condensed milk.
25. How does paneer vary from cheese ?
26. What are all the technological aspects of softy manufacturing of ice cream ?
27. Differentiate between skimmed milk and toned milk.

(7 × 2 = 14 weightage)

Part C

*Answer any two questions.
Each question carries 4 weightage.*

28. Explain the important unit operation followed in processing of milk in a dairy plant.
29. Discuss the methods followed for quality control measures in milk.
30. Explain the process of making cheese with flow chart.
31. Describe the dairy plant sanitation procedures in detail.

(2 × 4 = 8 weightage)

**FOURTH SEMESTER M.Sc. (FOOD SCIENCE AND TECHNOLOGY) DEGREE
EXAMINATION, JUNE 2018**

(CUCSS)

FT 4C 24—TECHNOLOGY OF MEAT, FISH AND POULTRY PRODUCTS

(2014 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A*Answer any fourteen questions.**Each question carries 1 weightage.*

1. Sheep is slaughtered by using _____ method.
2. Collagen is rich in _____ acids.
3. Normally ultimate pH of muscle is _____.
4. Nitrite reacts with amines to form _____.
5. _____ is the irradiation dosage level applied to meat preservation.
6. _____ imparts juiciness to meat.
7. _____ proteins are the main water holders in meat.
8. Animals should be rested prior to _____ killing.
9. Rendered fat from pig is _____.
10. Collagen on heating yields _____.
11. Yolk index is the ratio between _____.
12. Due to _____ contaminant in meat, the poisoning is very faster.
13. Chitosan is used for _____.
14. _____ is used for colour development in curing of meat.
15. Slaughtering without stunning is known as _____ method.
16. Egg contains _____ % of yolk.
17. Immersing poultry in hot water is called as _____.

(14 × 1 = 14 weightage)

Turn over

Part B

Answer any seven questions.

Each question carries 2 weightage.

18. What are the important aspects covered in post mortem inspection of meat ?
19. Mention the steps in slaughtering and dressing of sheep.
20. Explain briefly about post mortem biochemical changes in meat.
21. Write the pre-slaughter methods.
22. List the chemical preservation methods of meat.
23. How cryogenic freezing is used in meat.
24. Usage of Omega- 3 fatty acids.
25. Electrical stimulation.
26. Fish products.
27. Poultry products.

(7 × 2 = 14 weightage)

Part C

Answer any two questions.

Each question carries 4 weightage.

28. Classify muscle proteins based on their solubility and explain how they affect meat toughness.
29. Describe the essential steps involved in the production of surimi.
30. Write in detail about the processing and preservation of meat.
31. Write the quality standards for meat, fish and poultry.

(2 × 4 = 8 weightage)

**FOURTH SEMESTER M.Sc. (FOOD SCIENCE AND TECHNOLOGY)
DEGREE EXAMINATION, JUNE 2018**

(CUCSS)

FT 4C 23—FOOD PLANT AND QUALITY MANAGEMENT

(2014 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

Answer any fourteen questions.

Each question carries 1 weightage.

1. The taste of food material can be measured artificially by using _____.
2. _____ is the heat sensitive material in citric foods.
3. Temperature affects the nutritional quality of the processed food material (true/false).
4. Non enzymatic browning is also known as _____.
5. _____ scale is used to measure the sensory quality values.
6. Like extremely to dislike extremely scores are recorded using _____ scale.
7. ISO 22000 implies _____.
8. SSOP means _____.
9. GHP means _____.
10. _____ method is used for documentation purposes.
11. _____ is the method to test the package quality.
12. Product recall is done in _____ situation.
13. FSSAI stands for _____.
14. _____ is the food laws used for export of food material.
15. Break even analysis is used to _____.
16. Networking ideas help in _____.
17. The Meat Products order is a compulsory standard (true/false).

(14 × 1 = 14 weightage)

Turn over

Part B

*Answer any seven questions.
Each question carries 2 weightage.*

18. Write the major difference between food quality and food safety.
19. List the sensory qualities of food materials.
20. Define Critical control point (CCP).
21. What are BIS standards? How are they useful to us ?
22. Give the importance of HACCP in meat industry.
23. Mention features of ISO 9000.
24. List the international food laws.
25. Write the steps involved in GMP.
26. Write the steps involved in break even analysis.
27. List the factors responsible for fixation of prices.

(7 × 2 = 14 weightage)

Part C

*Answer any two questions.
Each question carries 4 weightage.*

28. Explain the seven steps in HACCP.
29. What are all the mandatory standards? Discuss codex alimentarius.
30. Write a detailed note on sensory evaluation of food and beverages.
31. Discuss the marketing aspects of the food products.

(2 × 4 = 8 weightage)

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR) EXAMINATION
MARCH 2021****(CBCSS)****Food Science and Technology
FST 4E 18—DAIRY TECHNOLOGY
(2019 Admissions)****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. *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 carries 2 weightage.*

1. What is green cheese ?
2. What is the significance of homogenization ?
3. What is filled milk ?
4. Which starter cultures are used for producing yoghurt ?
5. What is the role of rennet in cheesemaking ?
6. What are the ideal characteristics of a cleaning agent ?
7. What are the FSSAI standards of cow and buffalo milks ?

(4 × 2 = 8 weightage)**Part B**

*Answer any four questions.
Each question carries 3 weightage.*

8. Write about various platform tests ?
9. Differentiate between direct and indirect methods of UHT process.

Turn over

10. Write about the classification of cheeses. Give examples for each category.
11. Discuss the factors that affect the composition of milk.
12. Explain the role of stabilizers and emulsifiers in ice cream.
13. Discuss the desirable quality attributes of Chhana and Paneer ?
14. Write about “clean-in-place” system employed in a liquid milk processing plant.

(4 × 3 = 12 weightage)

Part C

*Answer any two questions.
Each question carries 5 weightage.*

15. With the help of a flow diagram, explain the process of manufacturing skimmed milk powder.
16. Delineate the FSSAI standards of *khoa*. Explain the differences between *khoa* prepared from buffalo and cow milks.
17. With the help of a flow diagram, explain the process of manufacturing Cheddar cheese.
18. Differentiate between sweetened condensed milk and evaporated milk. Explain the physico-chemical properties of condensed and evaporated milks.

(2 × 5 = 10 weightage)

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR) EXAMINATION
MARCH 2021**

(CBCSS)

Food Science and Technology

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

(2019 Admissions)

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. *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 carries 2 weightage.

1. Briefly describe principles of post mortem inspection.
2. Describe chemistry of poultry egg shell color.
3. What is Haugh Unit ? Classify commercial table egg based on Haugh Unit.
4. Note on factors effecting rigor mortis in fish.
5. Explain the role of curing agents in curing of meat.
6. Describe two most important theories of rigor mortis.
7. Write on abattoir by-products.

(4 × 2 = 8 weightage)

Part B

Answer any four questions.

Each question carries 3 weightage.

8. Give an account on the current challenge to meat industry in India.
9. Descript the structure of muscle with neat diagrams.

Turn over

10. Give an account of the HACCP implementation in a poultry processing plant.
11. What is Chitosan ? List out its commercial applications and explain in detail.
12. Explain in detail the role of different enzymes in meat processing.
13. Explain in detail various methods used in the quality measurement of fish.
14. Note on spoilage characteristics of meat.

(4 × 3 = 12 weightage)

Part C

Answer any two questions.

Each question carries 5 weightage.

15. Explain in detail post-mortem biochemical changes in meat and poultry.
16. Describe in detail various steps involved in sheep processing to obtain hygienic meat.
17. Write on :
 - (a) With suitable diagram explain the structure of poultry egg.
 - (b) Write on composition, nutrition and functional properties of poultry egg.
18. What is a comminuted meat product ? Describe in detail the ingredients and various steps involved in meat sausage production.

(2 × 5 = 10 weightage)

**FOURTH SEMESTER M.Sc. DEGREE (REGULAR) EXAMINATION
MARCH 2021**

(CBCSS)

Food Science and Technology

FST 4E 16—FOOD PLANT AND QUALITY MANAGEMENT

(2019 Admissions)

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. *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 carries 2 weightage.*

1. Explain the scope of FSSAI act briefly.
2. Describe factory overheads in food industry.
3. Genetically Modified foods—Explain briefly.
4. Short note on microbial quality of food.
5. Quality Audits -Explain briefly.
6. Describe the significance of HACCP in meat industry.
7. Write a short note on GLP.

(4 × 2 = 8 weightage)

Part B*Answer any four questions**Each question carries 3 weightage.*

1. Describe in detail about the nutritional quality of food.
2. Explain elaborately about Costing in Food Industry.

Turn over

3. Give an account of European Union food Regulations.
4. Write note on components of patent application form.
5. Write briefly about SOP and SSOP.
6. Explain briefly about BIS and AGMARK.
7. Write note on in-process monitoring and records with example.

(4 × 3 = 12 weightage)

Part C

Answer any two questions.

Each question carries 5 weightage.

1. Explain in detail the purchase procedure of materials in food industry.
2. Describe in detail - Food Import regulations.
3. What is the role of ISO 17025 standard in Quality Management and describe general requirements and main guidelines.
4. Discuss in detail about the salient features of FSSAI act and its functions as well as authority.

(2 × 5 = 10 weightage)