

**THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2021**

Food Technology

FTL 3C 04—PRINCIPLES OF FOOD SCIENCE

(2019—2020 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A

*Answer at least **eight** questions.*

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 24.

1. What is reconstituted milk ?
2. What is titrable acidity ?
3. What is the application of HFCS in food ?
4. What is coagulation of egg ?
5. Which is the protein which gives loaf volume in bread ?
6. What is age related muscle degradation ?
7. Enlist the natural enzymes used for meat tenderization.
8. What are the preservation methods of fish ?
9. What is game meat ?
10. Enlist any *two* major functions of spices in food.
11. What is Blanching ?
12. Brief the standards of double toned milk.

(8 × 3 = 24 marks)

Section B

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. Write a short note on basic five food groups and their nutritional factors.
14. Write in details post-harvest physiology of fruit and vegetables.
15. Write a short note on chemical composition of major spices.
16. Explain in details process of filtration and clarification of milk.
17. Explain in details industrial processing of egg.
18. Write in brief thermal induced changes in meat.
19. Write a short note on functional properties of sugar in food.

(5 × 5 = 25 marks)

Section C

Answer any one question.

The question carries 11 marks.

20. Explain in detail structure and composition of meat.
21. Explain in details the processing of fish and fish based products.

(1 × 11 = 11 marks)

**THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION
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Food Technology

FTL 3B 05—FOOD ENGINEERING

(2019—2020 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A

*Answer at least **eight** questions.*

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 24.

1. What is the principle of freeze draying ?
2. Expand HTST and UHT.
3. What is Rheology ?
4. Enlist any *four* refrigerants.
5. Anemometer is used to measure what ?
6. Storage modulus in a rheogram represents what behaviour ?
7. Starch paste viscosity can be determined by using _____.
8. At _____ condition the water activity of food is equal to relative humidity.
9. Hysteresis is generally observed in _____ products.
10. Freezing time can be determined by using _____ equation.
11. Differentiate conduction and convection.
12. Differentiate sun drying and solar draying.

(8 × 3 = 24 marks)

Section B

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. Differentiate Newtonian and non-Newtonian fluids with examples.
14. Compare and contrast freezing and chilling.
15. Write a short note on vapour compression refrigeration system.
16. Differentiate between falling film and rising film evaporators.
17. Explain in detail the principle and application of a freeze dryer.
18. Write in brief the engineering properties of food material.
19. Explain in detail cryogenic freezing.

(5 × 5 = 25 marks)

Section C

Answer any one question.

The question carries 11 marks.

20. Differentiate drying and dehydration. Explain different methods of drying and their application.
21. What are the types of boilers? With the help of a neat diagram explain the parts of a boiler.

(1 × 11 = 11 marks)

**THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
NOVEMBER 2021**

Food Technology

FTL 3B 05—TECHNOLOGY OF FOOD PRESERVATION

(2017—2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all the questions.

Each question carries 1 mark.

Multiple choice :

1. Cold sterilisation refers to preservation of food by:
 - (a) Refrigeration.
 - (b) Irradiation.
 - (c) Dehydration.
 - (d) Lyophilization.
2. Which of the following pieces of canning equipment cannot be reused ?
 - (a) Metal lid with sealing compound.
 - (b) Pressure canner.
 - (c) Metal screw band.
 - (d) Glass canning jar.
3. Who is regarded as father of canning ?
 - (a) Nicholas Appert.
 - (b) Louis Pasteur.
 - (c) John Hall.
 - (d) Bryan Dokin.
4. Spreading pathogens from one surface to another :
 - (a) Infection.
 - (b) Cross-contamination.
 - (c) Autoclaving.
 - (d) Food preservation.

Fill in the blanks :

5. Anything that cause disease are called _____.
6. _____ is a fungus that causes fermentation.

7. Sugar is a Class _____ preservative.
8. pH range of high acid food is _____.

Give very short answer :

9. Pasteurisation of milk kills all micro-organisms by rapidly heating the milk until it boils and then allowing it to cool slowly. Statement is true or false ? Explain why ?
10. What is shelf life ?

(10 × 1 = 10 marks)

Part B

*Answer any **five** questions.*

Each question carries 2 marks.

11. Define fermentation.
12. What are the scopes of irradiation in food industry ?
13. What is radura ?
14. What is dehydrofreezing.
15. What is PEF ?
16. What is the significance of head space in canning ?
17. What is chilling injury ?

(5 × 2 = 10 marks)

Part C

*Answer any **six** questions.*

Each question carries 5 marks.

18. Explain food protection and food preservation.
19. Explain low temperature preservation techniques.
20. What are cryogenic freezers ? Explain its application in food industries
21. Write a short note on various preservation technique used in preservation of fruits and vegetables.
22. Write a short note on ohmic heating.

23. Write the major classification of preservative.
24. What are the pre-treatment done before drying ?
25. Differentiate between slow freezing and blast freezing.

(6 × 5 = 30 marks)

Part D

*Answer any **two** of the following.
Each question carries 15 marks.*

26. Differentiate between cryogenic freezing and immersion freezing.
27. Describe low temperature and high temperature method of preservation technique used in food industries and its significance.
28. Explain food irradiation and its mode of action in food.
29. Write a detailed note about drying as a preservation technique.

(2 × 15 = 30 marks)