

PH 591.4

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St Aloysius College (Autonomous)

Mangaluru

Semester IV – P.G. Examination - M.Sc. Food Science and Technology

May/June - 2023

MEAT, FISH AND POULTRY PROCESSING TECHNOLOGY

Time: 3 Hours

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Max. Marks: 70

(6x3=18)

I. Answer any SIX of the following.

1. Write a short note on microbial spoilage of meat. Name any two food-borne illness outbreaks related to meat/poultry consumption.
2. Advantages and Disadvantages of Meat Analogs.
3. List some of the quality concerns associated with icing or chilling fresh fish.
4. Brief on spray drying of eggs.
5. Define rigor mortis and cold shortening.
6. What are meat analogs?
7. Write on different stages of egg white foams.

II. Answer any FOUR of the following.

(4x7=28)

8. Explain different methods of fish salting taking into consideration the quality issues.
9. Define restructuring of meat? Explain the steps in the production of sausages.
10. Briefly explain the biochemical changes associated with the conversion of muscle into meat.
11. Write a note on natural and artificial methods of meat tenderization.
12. Explain the external quality evaluation of eggs.

III. Answer any TWO of the following:

(2x12=24)

13. Discuss on the intrinsic & extrinsic factors affecting quality of meat.
14. Discuss the post-harvest changes in fish and brief on any one by-product of fish processing.
15. Elaborate on stunning and slaughtering methods.

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Semester IV – P.G. Examination - M.Sc. Food Science and Technology

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May/June - 2023

FOOD PACKAGING

Time: 3 Hours

Max. Marks: 70

I. Answer any **SIX** of the following.

(6x3=18)

1. What are the functions of food packaging?
2. Write a short note on packaging of microwavable foods.
3. Write any three unique properties of glass based food packaging.
4. Differentiate between thermoplastics and thermosetting plastics.
5. Write a note on closed loop recycling of packaging materials.
6. How Modified Atmosphere Packaging is helpful in preserving the colour of red meat?
7. Write a short note on designing of packaging materials.

II. Answer any **FOUR** of the following.

(4x7=28)

8. Discuss on Primary, Secondary and Tertiary packaging.
9. With the help of a neat diagram, explain the working of a single screw extruder.
10. Discuss on Edible films and coatings.
11. Explain the FSSAI regulations for labelling and packaging of food products
12. Write a note on Tin plate containers and tinning process.

III. Answer any **TWO** of the following:

(2x12=24)

13. Explain in detail on container making process.
14. Elaborate on various types of paper and paper products used in food packaging.
15. Compare and contrast active & intelligent packaging. Discuss any 3 types of active packaging.

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Semester IV – P.G. Examination - M.Sc. Food Science and Technology

ST. ALOYSIUS COLLEGE May/June - 2023

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FOOD BIOTECHNOLOGY

Time: 3 Hours

Max. Marks: 70

I. Answer any **SIX** of the following.

(6x3=18)

1. Write a short note on fermentation kinetics.
2. Write short note on smart foods.
3. What is high gravity brewing?
4. List the four important steps of downstream processing.
5. Write a short note on basics of genetic engineering.
6. Write a short note on the significance of anti-foams.
7. What are miso and natto products?

II. Answer any **FOUR** of the following.

(4x7=28)

8. Explain with a neat sketch the working of a fluidized bed bioreactor.
9. Explain in detail about how to carry out sterilization of the fermenters.
10. Discuss the process of manufacturing whiskey and Vodka.
11. Explain liquid-liquid extraction and give its applications.
12. Explain the significance of Genetically Modified Organisms Act 2004.

III. Answer any **TWO** of the following:

(2x12=24)

13. Explain in brief the effect of concentration polarization and fouling in membrane process.
14. Explain with a neat sketch the mechanism and construction of the bead mill used for cell disruption.
15. Explain in detail about the Golden rice and BT-Brinjal cases as a transgenic crop.

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Semester IV – P.G. Examination - M.Sc. Food Science and Technology

May/June - 2023

FOOD SAFETY AND QUALITY CONTROL

Time: 3 Hours

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Max. Marks: 70

I. Answer any SIX of the following.

(6x3=18)

1. What is TQM? Write on its importance in the Food Industry.
2. Differentiate between Quality Control and Quality Assurance.
3. Give the silent features of ISO 22000.
4. What is critical limit?
5. Differentiate between cleaning and sanitation.
6. Write briefly about USFDA and FSSAI.
7. Define Traceability System and mention at-least two characteristic of the system.

II. Answer any FOUR of the following.

(4x7=28)

8. Explain on Food labeling with regard to FSSAI regulation.
9. Explain on different Food hazards, their sources, effects, detection and prevention.
10. What are the major principles of Good Laboratory Practices?
11. Discuss on the role of International Food Regulatory Bodies (ISO and Codex) in Food Safety.
12. Discuss the effects of pests on agricultural practices.

III. Answer any TWO of the following:

(2x12=24)

13. Elaborate in detail about the WTO agreement including SPS and TBT agreement.
14. Explain in detail the seven HACCP Principles.
15. Discuss on food quality management (FQM). Discuss Good Manufacturing Practices in a food production unit.
