Ref. No. : Ex/PG/FTBE/T/112C/2024

M.TECH. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING FIRST YEAR FIRST SEMESTER – 2024

Subject : ADVANCED FISH PROCESSING TECHNOLOGY

Time: 3hr **Full Marks: 100**

(50 marks for each Part)
(Use sepatate Answer Script for each Part)

PART I (50 Marks)

Answer any **five** of the following: 10x5=50

1. How fish is handled and processed onboard? What is the importance of fish candling? 7+3=10

2. Name any four chemical compounds that are related to the shelf life of fish and how? 2.5x4=10

3. How chemical method is used to extend the shelf life of fish and fish products? What are the criteria to select ideal chemical agent? 7+3=10

4. Explain the working principle of an immersion freezer. What are the problem and remedy of immersion freezer? 6+4=10

5. How the fish quality is assessed by sensory and chemical methods? 5+5=10

6. Explain any one method each for short distance and medium distance transportation of fish. 5+5=10

7. Write short notes on any **two** of the following: 5+5=10

i. Kamaboko production

ii. Minced fish

iii. Fish protein isolate

[Turn Over

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M.TECH. FTBE FIRST YEAR FIRST SEMESTER EXAMINATION 2024

Subject: **ADVANCED FISH PROCESSING TECHNOLOGY.**

Use separate answerscript for each part.

Part II

Answer Question No. 4 and any two from the rest.

1. What are the three types of processes which can be employed for drying of fish? What are the characteristic features of four salting methods – brining, pickling, Kench curing and Gaspe curing? What are the objectives of smoking of fish? 5+10+ 5

2. What are the three types of modified atmosphere packaging applied to fish? How are the gases CO_2, O_2 and N_2 utilised for modified atmosphere packaging of food? 6+14

3. What are the three maxims of cannery safety? How and why are fish divided into pH groupings for canning of fish? 7+13

4. Answer any two (5+5)
   (a) Continuous smoke production system.
   (b) Theories regarding influence of CO_2 on the bacterial cell.
   (c) Heat transfer in caned fish.
   (d) Effects of frozen storage on fish.