

Subject- FPT-211 Freezing Technology, 2 (1+1)
Theory

Sl. No.	Topic	No. of lecture	Name of the Course Instructor
1.	Introduction to freezing technology; characteristics of fish and shellfish	2	Dr. Md. Aman Hassan
2.	Changes in fish after death, spoilage of fish, spoilage and pathogenic microorganism	3	
3.	Handling of fresh fish; sanitation in processing plants	1	
4.	Principles of low temperature preservations. Chilling of fish –methods and equipment for chilling; icing – quality of ice, ice making	2	
5.	Refrigerated or chilled sea water, chilling rate; spoilage of fish during chilled storage; use of antibiotics and chemicals	1	
6.	Freezing of fish fundamental aspects; heat units; freezing point depression, Eutectic point; freezing rate	1	
7.	Methods of freezing, freeze drying	2	
8.	Physico–chemical changes that occur during freezing, mechanism of ice crystal formation	2	
9.	Preparation of fish for freezing	1	
10.	Changes that occur during frozen storage microbiological, physical and chemical Changes, protein denaturation, fat oxidation, dehydration, drip	2	
11.	protective treatments – Polyphosphate, glazing, antioxidants, packaging;	1	
12.	Thawing of frozen fish – methods of Thawing. Transportation of frozen fish, cold chain, quality control,	2	
13.	HACCP in freezing Industry.	1	
Total		21	

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Practical

Sl. No.	Topic	No. of lecture	Name of the Course Instructor
1.	Sanitation & Plant Housekeeping	2	Dr. Md. Aman Hassan
2.	Preparation of flake ice	1	
3.	Layout of Prawn Freezing Plant	1	
4.	Tools and Instruments used in Freezing Plants	2	
5.	Processing of Round Fish Freezing	1	
6.	Determination of cooling rate of fish	2	
7.	Storage method of fishes	2	
8.	Fillet preparation and its storage	1	
9.	Calculation of the ice requirement of cooling fish	1	
10.	Calculation of the ice requirement for the storage of fish	1	
11.	Preparation of brine for freezing	1	
12.	Ice plant/Freezing plant visit	1	
Total Practical		16	



Signature of Course Instructor