

UNIVERSITY OF RUHUNA
Bachelor of Science in Fisheries & Marine Sciences Degree –August/September 2018
Level IV Semester I

FSH 4122 – Fish Postharvest Technology (Theory)

Time – 1½ hours

Answer only three (03) questions

01. (i) What is meant by intrinsic quality of fish? (10 marks)
- (ii) What are the factors that determine the intrinsic quality of fish? (10 marks)
- (iii) Write a short account on natural toxins found in fish. (30 marks)
02. Write short accounts on the following
- (a) Microbial deterioration in fish (25 marks)
- (b) Gaping in fish filets (25 marks)
03. A. “Chilling of fish after harvesting is important to extend the shelf life, despite the possible physical and biochemical changes”. Briefly justify this statement. (30 marks)
- B. What are the factors that limit the storage life of frozen products? (10 marks)
- C. Briefly discuss the heat transferring process in canned fish products. (10 marks)
04. Write short answers for the following. (05 marks each)
- (i) What is the advantage of the Condition factor (K-value) in quality assessment?
- (ii) What is the basic concept of marinating?
- (iii) Explain what is meant by “blood pickle”?
- (iv) Describe how purity of salt influence the final quality of the product?
- (v) Explain how “Freezer-burn”, can be avoided.

- (vi) Reasons for tropical fish to have a higher shelf-life than temperate fish during chilling?
- (vii) What is the difference between cold smoking and hot smoking?
- (viii) Explain the importance of Spray or Cryogenic freezing.
- (ix) What is meant by case hardening and Dun's spoilage during processing practices?
- (x) Briefly explain why HACCP has to be implemented in food processing?

04. The basic activities involved in fresh fish handling and processing are given in the flow diagram given below.



A. Answer the following.

- a. What are the physical, chemical and biological hazards that are related to de-heading, gutting, skinning and filleting? (15 marks)
- b. Which preventive measures can be taken to control those hazards? (15 marks)

B. Using the decision tree, briefly describe the identification of CCPs. (20 marks)
