Chattogram Veterinary and Animal Sciences University, Chattogram
Department of Fishing and Post-Harvest Technology
M.S. in Fishing and Post-Harvest Technology
Final Examination, July-December Semester, 2020
Course Code & Name: BFP 502 (T) & Biotechnology in Fish Processing
Time: 2 hour; Full Marks: 40

Answer any 5 (Five) from the following questions:

1. What do you know about FPH? Discuss the sources of FPH. Describe briefly the biotechnological approaches of fish-meat solubilization. 8

2. "Knowledge regarding seafood microbiology is important for Fisheries Graduates"- Justify. Discuss briefly the rapid methods and automation in seafood microbiology. 8

3. Define proteases? Discuss the criteria need to be considered for the selection of proteases in fish industries. Briefly describe the traditional applications of proteases in seafood industries. 8

4. Enzymatic applications can change quality of fish sauce-Explain. Discuss briefly the microbial and chemical changes of fish sauce during fermentation. 8

5. What do you know about the composition of crustacean wastes? How you will manage these wastes through proper utilization? Discuss the future trends and challenges to utilize the crustacean wastes. 8

6. What do you know about waste-water recycling in seafood industries? Discuss briefly regarding different methods used for waste-water recycling in fish processing industries. 8

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Final Examination; July-December Semester, 2020
Course Code & Name: AQI 502 (T) & Advanced Fish Quality Control and Inspection
Time: 2 hour; Full Marks: 40

Answer any 5 (Five) from the following questions

1.	Define hazard. Briefly describe different types of hazards in fish processing premises. How you will minimize the hazards to ensure food safety in fish processing plant?	8
2.	What do you mean by Competent Authority? Schematically show the organogram of FIQC. Describe briefly the duties and responsibilities of Auditor and Inspector.	8
3.	Write down the principles of HACCP. Describe briefly the important tools for HACCP development and implementation in Fisheries sector.	8
4.	Define NRCP and SCP. Discuss the purpose and benefits of traceability in Fisheries sector. How you will implement traceability from farm to consumer?	8
5.	What do you know about Audit? How you will conduct audit in fish processing establishment? Describe the protocols you need to follow to resolve the non-conformities of the audit.	8
6.	What is Risk based inspection? Classify the fish processing establishments based on risk management.	8

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Final Examination, July – December Semester 2020

Course Code & Name: FBT 502 Fishery By-products Technology

Full Marks: 40; Time :2 hours

Answer any 4 (FOUR) of the following questions:

1. What is fish silage? How will you process fish silage? Write the processing protocol of fish oil and write its significance in different aspects.

2. How will you explain functional products? Give a brief overview on processing of functional products where seaweed are considered as raw materials.

3. Write down processing techniques, application and national to global prospects on followings: (i) Gelatin, (ii) Cavair, (iii) Fish roe and milt, iv) Pearl Essance.

4. What is fish peptide? How will you process fish peptide commercially? Write the applications of fish peptide.

5. What do you know about FPC (fish protein concentrate)? Give a detail overview including processing to usage of FPC.

6. Do you think 'algae can be the potential source of nutraceuticals? Write down nutraceuticals and pharmaceuticals aspects (processing, application to international trade) of Agar and Carrageenan.

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M S in Fishing and Post Harvest Technology

Final Examination, July – December Semester 2020

Course Code & Name: SWB 502 & Seaweed Biotechnology

Full Marks: 40; Time:2 hours

Answer any 4 (FOUR) of the following questions:

1. List out 5 (five) widely cultured species in seaweed nations. Give the detail culture techniques of *Porphyra* spp. commercially practiced in the world.

2. How will you culture *Laminaria* sp. in open sea? Write its commercial significance.

3. List down different industrial products manufacture from seaweeds. How will you establish a seaweed based processing industry? Write down the significance of seaweed in cosmeceutical industry.

4. How will you consider seaweed as an alternative energy source? Give a detail extraction protocol of industrial biofuel from seaweed.

5. How do you know about bioremediation? Do you think seaweed can be a potential candidate for bioremediation in sea ranching? Give an effective bioremediation protocol in marine environment.

6. How do you explain seaweed and its biotechnological aspects? Write the current scenario of seaweed production in the world.

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Final Examination; July-December Semester, 2020
Course Code & Name: AFP 502 (T) & Advanced Fish Processing
Time: 2 hour; Full Marks: 40

Answer any 5 (Five) from the following questions

1. Define Fish Quality. "Shelf-life of different processed fish and fishery products are directly related with the quality parameters of raw material"-Justify. 8

2. What do you know about the handling of raw fish? Discuss the factors affecting the raw materials quality of fish. Briefly describe the role of fish supply-chain and value-chain in reducing quality loss of fish. 8

3. Discuss briefly about the technological, biochemical and bacteriological problems associated with different fishery products in Bangladesh. 8

4. List down the name of exportable fishery products of Bangladesh. Discuss briefly about the standard methods for the preparation of 5 (five) exportable fishery products of Bangladesh. 8

5. What do you know about the Standards and Specifications? Discuss the importance of development of National and International Standards in food safety aspects. Briefly describe the role ISO 9000 standard in maintaining product quality. 8

6. What do you know about USFDA? Discuss the responsibilities of USFDA to ensure the quality. How USFDA contributes in Fisheries sector? 8

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Final Examination, July-December Semester, 2020
Course Code & Name: SFB 502 (T) & Seafood Biochemistry
Time: 2 hour; Full Marks: 40

Answer any 5 (Five) from the following questions

1.	Discuss the nutritional compositions of fish. Why the knowledge of seasonal variations in fish is important for fish processors? Describe briefly the health benefits of fish nutrients.	8
2.	Define seafood toxins. Discuss briefly about the naturally and chemically occurring toxins in seafood, with their impacts on human health.	8
3.	Classify fish protein based on their solubility. Briefly discuss the biochemical changes in fish muscle during rigor-mortis.	8
4.	"Do you think the composition of vitamins and minerals can change with the size and habitat of fish"-Explain. Discuss briefly the effects of processing and storage on vitamin and mineral content of fish.	8
5.	What do you know about fish pigments and flavours? Discuss the role of pigmentation on fish and seafood.	8
6.	What do you know about the taste of fish? Discuss briefly about the taste and flavor-active compounds in seafood.	8