Chittagong Veterinary and Animal Sciences University
MS in Fishing and Post Harvest Technology
January-June Semester, Final Exam-2017

Course No. AFM-501, Course Title: Advanced Fisheries Microbiology

Total Marks: 40; Time: 2 hours

Figure in the right margin indicates full marks. Individual parts of a question shall be answered together.

Answer the following questions:

1.	a)	Enumerate the significance of microorganisms in nature.	3
	b)	Do you think finfish are more perishable than any other muscle food? Justify.	2
	c)	"Fish is an ideal substrate for microbial growth"-explain.	5
2.	a)	What do you mean by browning problem in *Kamaboko*?	1
	b)	Discuss the effects of surimi processing on microorganisms.	5
	c)	What do you mean by histamine poisoning? How does it take place? Mention the name of microorganisms associated with histamine poisoning along with its control measures.	4
3.	a)	What do you mean by spoilage organisms and spoilage association? Illustrate different spoilage organisms of fresh and chilled fish collected from temperate and tropical water under different atmospheric conditions.	3
	b)	Make a list of major naturally occurring microflora in different crustaceans.	3
	c)	What happens when microorganisms act upon amino acids? Explain.	2
	d)	"Bacteria utilize different macromolecules as their substrate and produce different compounds"- explain with examples.	2
4.		Write short notes on the following (**Any two**):	5×2 =10

a) Indicator organisms b) Seafood safety c) Microorganisms and public health concern

Chittagong Veterinary and Animal Sciences University

Department of Fishing and Post Harvest Technology

January-June Semester, Final Examination 2017

Course code: MFT-501, Course Title: Modern Fishing Technology

Full Marks: 40, Time: 2 hours

Answer any **four (04)** questions. A figure in the right margin indicates full marks.

1. a) Write down the importance of studying Modern Fishing Technology. 3
   b) Briefly discuss about the trends of fishing gears used in the bay of Bengal. 3
   c) What is trammel net? Classify different types of gillnet based on depth of operation 4

2. a) Differentiate artisanal fishing with industrial fishing. 3
   b) "Mid water trawling is better than bottom trawling"- justify the statement. 3
   c) Briefly discuss about major fishing grounds in the Bay of Bengal with their geographical location. 4

3. a) Explain major impacts of artisanal fisheries on marine ecosystem. 3
   b) Briefly discuss different types of auction system practiced in fish market. 3
   c) Enlist four pelagic and demersal marine fishes with their common and scientific name. 4

4. a) What is RADAR? Briefly discuss working principle of RADAR. 3
   b) Compare between fish detection and fish location. 3
   c) Write shot notes on EPIRB and ECDIS. 4

5. a) When a foreign fishing vessel can enter into Bangladesh water without license. 3
   b) "Transducer is called the heart of eco-sounder" – justify the statement.. 3
   c) Write an overview of marine fisheries rules 1983. 4

6. a) What do you mean by shoaling behavior? Enlist benefits of shoaling. 3
   b) Compare between shoaling and schooling. 3
   c) Briefly discuss shoaling behavior of sardine. 4

Chittagong Veterinary and Animal Sciences University

Department of Fishing and Post Harvest Technology

M. S. in Fishing and Post Harvest Technology

January – June Semester Final Examination, 2017

Course code: FPT 501 (T), Course title: Fish Preservation Technology

Full Marks: 40; Time : 2 hours

Answer all the questions. Figure in the right margin indicates full mark of each question

1. What is freshness of fish? How will you determine freshness of fish? Discuss the organoleptic method of freshness test of a scaled finfish. 10

2. Suppose you are given 100 (one hundred) tons of spiny fatty fish for preservation. Choose the appropriate technique for preserving the supplied raw materials and justify in favour of your selected technique. 10

3. Write down the design of an ideal cold storage for frozen processed fish. Discuss the problems may occur with your processed products during storage time. 10

4. How will you minimize the huge quality loss of wet fish that occurs during handling and distribution to distant markets? 10

Chittagong Veterinary and Animal Sciences University

Department of Fishing and Post Harvest Technology

January-June Semester, Final Examination 2017

Course code: AFT-501, Course Title: Advanced Fishery Products Technology

Full Marks: 40, Time: 2 hours

Answer any **four (04)** questions. A figure in the right margin indicates full marks.

1.	a)	Write down the importance of studying advanced fishery products technology.	3
	b)	Write short note on salt burn problem.	3
	c)	Discuss different types of processing methods of Hilsha.	4
2.	a)	Discuss the prospects of canning in Bangladesh.	3
	b)	What are the problems associated with canned product.	3
	c)	Illustrate canning procedure of mackerel.	4
3.	a)	Write short note on 12 D concept.	3
	b)	What are the technical constrains during drying and storage of dried fish?	3
	c)	Enlist eight commercially important dried fishes with their common and scientific names.	4
4.	a)	Compare between surimi and mince.	2
	b)	How will you test gel-forming ability of a fish muscle?	3
	c)	Briefly discuss production procedure of crab-leg analog from surimi.	4
5.	a)	Classify fermented products based on salt concentration.	3
	b)	What are the criteria for selecting suitable materials for fermentation.	3
	c)	What types of poisoning may occur during fermentation?	4
6.	a)	Propose possible ways of introducing non-conventional seafood in Bangladesh.	3
	b)	How will you preserve fish roe?	3
	c)	Briefly discuss production procedure of fermented fish paste.	4

Chittagong Veterinary and Animal Sciences University

Department of Fishing and Post Harvest Technology

M. S. in Fishing and Post Harvest Technology

January – June Semester Final Examination, 2017

Course code: ATF 501 (T), Course title: Analytical Techniques in Fish Processing

Full Marks: 40; Time: 2 hours

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Answer *any four (04)* of the following questions. Figure in the right margin indicates full mark of each question

1. Explain the following terms with examples: i) Molar solution, and (ii) Normal solution. How will you prepare the TVB-N value determination protocol for an ideal fish inspection and quality control laboratory? 10

2. Classify fish protein on the basis of solubility. Write down preparation of myofibrillar protein for quality assessment of *Hilsha ilisha.* 10

3. What are the principles of spectrophotometer and centrifugation. Write down general laboratory procedure of spectrophotometer. Mention the overall applications of spectrophotometer. 10

4. What do you mean by electrophoresis? Name the different types of electrophoresis. Discuss detail working protocol of gel electrophoresis. 10

5. Discuss the principles and detail procedures of Gas Chromatography (GC) and High Performance Liquid Chromatography (HPLC). 10

Chittagong Veterinary and Animal Sciences University
MS in Fishing and Post Harvest Technology
January-June Semester, Final Exam-2017

Course No. IFM-501, Course Title: Industrial Fishery Management

Total Marks: 40; Time: 2 hours

Figure in the right margin indicates full marks. Individual parts of a question shall be answered together.

Answer **any 04** from the following questions:

1.	a)	Do you think management of industrial fishery is crucial for the sustainability of fisheries sector in Bangladesh? Explain.	4
	b)	Discuss the catch composition and contribution of artisanal marine fisheries in Bangladesh.	6
2.	a)	What do you mean by cost-effective fishing? Discuss the scenario of cost-effective fishing in Bangladesh and its underlying causes.	1+5 =6
	b)	Propose some ideas on sustainable effective fishing in the Bay of Bengal.	4
3.	a)	Illustrate different marketing channels in Bangladesh.	3
	b)	Discuss the possibilities and barriers of fish trading in Bangladesh.	4
	c)	What will be your recommendations for improving the existing marketing system in Bangladesh?	3
4.	a)	What are the pre-requisites for issuing health certificates of shrimp for export?	2
	b)	Why waste management is of profound significance in a processing industry?	2
	c)	What do you mean by total utilization of fishery waste? Discuss how fish waste can be utilized effectively by total utilization concept?	1+5 =6
5.		Write short notes on the following: (**Any two**) a) Effluent treatment plant (ETP) b) By-catch processingplant c) Hygiene and sanitation of fish	5×2 =10

Chittagong Veterinary and Animal Sciences University, Chittagong

Faculty of Fisheries

Department of Fisheries Resources Management

Master of Science in Fisheries Resource Management, January-June Semester Final Examination' 2017

Course No: **RCD-501 (Compulsory)**, Course Title: Research Methods, Concept and Design

Total Marks: 40, Time: 2 hours

Answer any **FOUR** questions. Illustrate your answer wherever necessary. Figure in the right margin indicates full marks.

1.	a)	How do you formulate objectives in a fisheries research?	**2.0**
	b)	Which one is more important in a research process between 'execution' and 'planning'? – Explain.	**3.0**
	c)	Write down the scopes of field research in Chittagong region of Bangladesh.	**5.0**
2.	a)	How many samples are suitable for an authentic research? Explain with an example.	**2.0**
	b)	Why do you calculate 'standard error' while collecting samples for a research?	**2.0**
	c)	Give a detail outline on Student's t-test in the data analysis of a research.	**6.0**
3.	a)	How do you graphically represent your obtained results?	**3.0**
	b)	Provide a detail on appropriate reference write-up in a thesis.	**7.0**
4.	a)	Why reconnaissance survey is important in socio-economic assessment?	**3.0**
	b)	Why conducting 'census' is impractical in research process?	**2.0**
	c)	Obtain a large sample confidence interval that suits the parametric nature of a population.	**5.0**
5.	a)	What are the fundamental parts of a research proposal?	**3.0**
	b)	Mention the significance of 'Budgeting' in conducting a sophisticated research.	**4.0**
	c)	How can you orient your readers by a catchy and attractive title?	**3.0**
6.	a)	Compare the 'primary' and 'secondary' sources of data in a research process.	**3.0**
	b)	When do data analysis become successful?	**3.0**
	c)	How can you overcome the weakness in participation?	**4.0**