

Chittagong Veterinary and Animal Sciences University  
M.S. in Fisheries Resources Management,  
**Course No. RFM 501 (T), Course Title: Riverine Fisheries Management (Theory)**  
**July-December Final Examination 2018**  
**Total Marks: 40, Time: 2 hours**

**Answer any four questions.**

1. a. List some suitable species for cage culture. Discuss the prospect of cage culture in Bangladesh. 2  
b. Describe fish pass as a habitat improvement tool. 6  
c. How can you mitigate the impacts of flood control dams on aquatic habitat? 2
2. a. What is participatory management of aquatic resources? How are the government management and local participation related to each other? 8  
b. What are the advantages and disadvantages of participatory management? 2
3. a. Why was the New Fisheries Management Policy introduced in Bangladesh? What is its principle? 2  
b. How various stakeholder groups differ from having access to resources? 6  
c. What are the types of interactions among the organisms in food web? 2
4. a. What are the general features of a river? 2  
b. Describe the present status of fish and non piscine fisheries resources. 8
5. a. According to the trophic level how the organisms are classified? 2  
b. Describe the basic ecological and hydrological requirements of aquatic organisms. 6  
c. Explain the reasons behind degradation of SIS biodiversity. 2
6. a. What is invasive species? Give three examples. 2  
b. Describe the causes of fish biodiversity degradation. What are probable recommendations would you made? 6  
c. What is destructive fishing gear? Describe the effects of illegal fishing practices. 2

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Master of Science in Fisheries Resource Management, July-December Semester  
Final Examination' 2018

Course Code: **IFM-502 (Elective)**, Course Title: Integrated Farm Management

Total Marks: 40, Time: 2 hours

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

1. (a) Enlists the components of integrated farming systems. 2.0  
(b) Briefly describe the constraints and opportunities of integrated farm management in context of Bangladesh? 4.0  
(c) How the governments can provide support for the development of integrated aqua-farming? 4.0
2. (a) Sketch the energy flow of integrated rice fish farming. 2.0  
(b) Describe the mutual benefits of rice and fish in integrated systems with scientific evidences. 6.0  
(c) Make a list of suitable fish species for rice fields with its common and scientific name. 2.0
3. (a) What factors should be considered during use of poultry waste in aquaculture. 2.0  
(b) How the integration of fish culture into small-holder livestock systems affects asset accumulation and livelihoods? 6.0  
(c) List down the popular integrated livestock-aqua farming. 2.0
4. (a) "Biosecurity is a part of biosafety"- explain the statement. 2.0  
(b) What are the components of a biosecurity plan? 2.0  
(c) Briefly describe about the requirements for a harmonized and integrated approach to biosecurity. 6.0
5. (a) Distinguish between conventional and organic aqua farming. 2.0  
(b) Define ecosystem approach to aquaculture and mention its aim. 2.0  
(c) What are the transition processes from a conventional approach to an ecosystems approach to aquaculture? 6.0
6. (a) Describe the environmental threats of integrated farming system. 5.0  
(b) How will you reduce public health risks from pathogens in livestock-fish systems? 5.0

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Master of Science in Fisheries Resource Management, July-December Semester Final Examination'  
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Course No: **MCR-502 (Compulsory)**, Course Title: **Mangroves Conservation and Restoration**  
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) Why mangroves are called 'renewable' resources? Explain with examples. 3.0  
b) "The significance of mangrove resources is no longer a eulogy in maintaining ecosystem balance of surrounding environment."- Justify 7.0
2. a) What do you know about aging of mangroves? 3.0  
b) How different population parameters of mangroves are inter-connected to mangrove aging? –Describe in brief. 7.0
3. a) Elaborate the sustainability of local livelihood in *Sundarbans* mangrove forest area. 3.0  
b) Plan and develop a model of environmental economics of mangrove ecosystem. 7.0
4. a) "The coastal aquaculture industry is being exaggeratedly blamed in mangrove destruction in Bangladesh." – Explain with your own justification. 3.0  
b) Discuss the natural causes of mangrove destruction. How can you overcome those? 7.0
5. a) Why mangrove ecosystem is called a 'nutrient trap'? 3.0  
b) Briefly discuss the different ecosystem processes involved in mangrove forest. 7.0
6. a) Why acid sulphate soil (ASS) accumulation has become a major threat to mangroves? 3.0  
b) Use your own imagination to develop an environment friendly tourist infrastructure adjacent to *Sundarbans* mangrove forest. 7.0

Chittagong Veterinary and Animal Sciences University  
M.S. in Fisheries Resources Management,  
Course No. CBFM 502 (T), Course Title: Community Based Fisheries Management  
July-December Semester Final Examination 2018  
Total Marks: 40, Time: 2 hour

Answer any four (4) of the following questions.

- |    |    |  |   |
|----|----|--|---|
| 1. | a. | What do you mean by community and community based fisheries management   | 2 |
|    | b. | Describe the models of CBFM with emphasizing on community identification, group formation, job description and distribution of benefits. | 8 |
| 2. | a. | How GOB and private initiatives support CBFM?  | 2 |
|    | b. | Describe linkage among fish, fisheries and communities along a waterbody.  | 6 |
|    | c. | How FCD and FCDI work?   | 2 |
| 3. | a. | What are the scope and importance of CBFM in Bangladesh?   | 2 |
|    | b. | Write an overview of CBFM in Asian countries from global perspective.  | 8 |
| 4. | a. | Who are the stakeholders for CBFM?   | 2 |
|    | b. | List some donor organizations and NGOs working for CBFM. What sort of services they provide?   | 6 |
|    | c. | How has CBFM been originated? What does sustainability of CBFM mean?   | 2 |
| 5. | a. | Describe the important factors to be considered for CBFM.  | 8 |
|    | b. | Write a short note on "CBFM in Haor"   | 2 |
| 6. | a. | Illustrate the socio-economic impact of CBFM in Bangladesh.  | 8 |
|    | b. | Explain the linkage among fish, fisheries and communities along waterbodies.   | 2 |

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Master of Science in Fisheries Resource Management, July-December Semester  
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Course Code: **WQA-502**, Course Title: Water Quality and Pollution Analysis

Total Marks: 40, Time: 2 hours

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

1. (a) "Human being affected by water pollution" – Justify. 3.0  
(b) Differentiate between pollution and contamination. 2.0  
(c) Briefly explain the major sources of land based and sea based pollutants in the Bay of Bengal. 5.0
2. (a) "Environments can affect the cage fish farming"- explain this statement. 2.0  
(b) How integration of aquaculture system helps to enhance fish production? 4.0  
(c) In Bangladesh what types of production systems is more feasible? Discuss in your point of view. 4.0
3. (a) How to achieve good water quality management in aquaculture? 5.0  
(b) Write down the impacts of flora and fauna in the aquatic systems. 5.0
4. (a) Briefly discuss about the factors responsible for affecting water flow. 5.0  
(b) Write down the procedure for determination of DO. 5.0
5. (a) "In alkaline water essential nutrients are found in higher quantities"- Justify this statement. 2.0  
(b) When liming are used? 2.0  
(c) Discuss the methods of fertilization in fish ponds. 6.0
6. (a) "Sewage pollution is a great barrier in water body"- explain the statement. 2.0  
(b) Differentiate between sewage and sludge. 4.0  
(c) Illustrate the primary, secondary and tertiary treatment of industrial effluent. 4.0

# Chittagong Veterinary and Animal Sciences University, Chittagong

## Faculty of Fisheries

### Department of Fisheries Resource Management

Master of Science in Fisheries Resource Management, July-December Semester Final Examination'  
2018

Course No: **FBI-502 (Compulsory)**, Course Title: **Fisheries Biodiversity**

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) What is biodiversity hotspot? How different levels of biodiversity are inter-linked each other? **4.0**  
b) "Biological diversity is an integral part of open water fisheries management."- Explain in the context of Bangladesh. **6.0**
2. a) When should you consider a vulnerable species more important than a critically endangered species? Explain with an example. **4.0**  
b) Prepare an analytical model of IUCN red-list categories. **6.0**
3. a) When and why restoration of aquatic habitat is impossible? **4.0**  
b) How can you manage aquatic biodiversity of *Sundarban Mangrove* forest? **6.0**
4. a) Elicit the principal reasons of biodiversity degradation in Bangladesh. **4.0**  
b) Develop a mathematical model of Simpson Index in field situations. **6.0**
5. a) "Ex-situ conservation is used for longtime conservation."-Justify **4.0**  
b) Discuss the significance of *ex-situ* conservation in the development of aquaculture industry in Bangladesh. **6.0**
6. a) Do you think the legislation for biodiversity conservation within Bangladesh EEZ is enough? - Elaborate according to your own thoughts. **4.0**  
b) How a participating government should interact after signing CBD? **6.0**