

Diploma in Aquaculture

**Optional Course
in
Fresh Water Aquaculture**

(Valid from 1st January, 2022 to 31stDecember, 2022)

Please Note

- Diploma in Aquaculture is a 28-credit programme. It comprises compulsory core course on Basics of Aquaculture and optional courses on two specialized streams of Aquaculture that are Freshwater Aquaculture and Coastal Aquaculture.
- The compulsory 'Basics of Aquaculture' course is worth 8 credits and has a component of 6 credits worth project work.
- Optional 'Freshwater Aquaculture' and 'Coastal Aquaculture' courses are of 8 credits each and have 6 credits worth of laboratory course each.
- You cannot appear in the Term-End Examination of any course without registering for the course. Otherwise, your result will not be declared and the onus will be on you.



**School of Sciences
Indira Gandhi National Open University
Maidan Garhim, New Delhi-110068**

(2022)

Dear Student,

We hope you are familiar with the system of evaluation to be followed for the Diploma in Aquaculture Programme. At this stage you may probably like to re-read the section on assignments for Elective Courses in the Programme Guide (on page 10) that we had sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation which would consist of **one tutor-marked assignment (TMA)** for this course.

Instructions for Formatting Your Assignments

Before attempting the assignment, please read the following instructions carefully.

On top of the first page of your TMA answer sheet, please write the details exactly in the following format:

ENROLMENT NO.:.....

NAME :.....

ADDRESS :.....

.....

COURSE CODE:

COURSE TITLE:

ASSIGNMENT NO.:

STUDY CENTRE: DATE :.....

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

- 1) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- 2) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 3) Your answers should be precise.
- 4) While solving problems, clearly indicate the question number along with the part being solved. Be precise. Write units at each step of your calculations as done in the text because marks will be deducted for such mistakes. Take care of significant digits in your work. Recheck your work before submitting it.
- 5) **This assignment will remain valid for one year from January 1, 2022 to December 31, 2022.** However, you are advised to submit it within **12 weeks** of receiving this booklet to accomplish its purpose as a teaching-tool. Answer sheets received after the due date shall not be accepted.

We strongly feel that you should retain a copy of your assignment response to avoid any unforeseen situation and append, if possible, a photocopy of this booklet with your response.

We wish you good luck.

ASSIGNMENT
(Tutor Marked Assignment)
Fresh Water Aquaculture

Course Code : BAQ-002

Assignment Code : BAQ-002/TMA/2022

Maximum Marks: 100

1. Differentiate between the following: (2½ x 4)
 - (a) Male and female carps
 - (b) Wild hatchery and farmed fish
 - (c) Indian major carps and Chinese carps
 - (d) Catfish and magur
2. Write short notes on the following: (2½ x 4)
 - (a) Applications of *Spirulina*
 - (b) Mixed culture
 - (c) Fish feed formulation
 - (d) Culturing ornamental fish for aquaria
3. What are the common diseases of finfishes? Describe the fungal infection of finfishes. What are the strategies of disease prevention and treatment? (10)
4. Write a short essay on diseases caused by deficiency of macronutrients and micronutrients in freshwater fish under culture. (10)
5. (a) Name any two catfish. How do they breed naturally, and how is breeding induced through hormonal treatment? (5)
(b) What is the importance of *Azolla* cultivation in fish farming? (5)
6. (a) List the names of live bearers and egg layers ornamental fishes. (5)
(b) Describe the culture of anyone fish from each type of your choice. (5)
7. Differentiate between *Macrobrachium rosenbergii* and *Macrobrachium malcolmsonii*. Describe breeding of *M. rosenbergii*. (10)
8. Describe the site selection and design of an aquafarm for freshwater fishes briefly. (10)
9. Describe why and how predatory and weed fishes are eradicated from fish culture ponds. (10)
10. Define the pearl, and classify them. Describe the mineralization of pearl. (10)
