BAQ-002

ASSIGNMENT BOOKLET

DIPLOMA IN AQUACULTURE

Optional Course

in

FRESHWATER AQUACULTURE

Valid from 1st January, 2026 to 31st December, 2026

PLEASE NOTE

- Diploma in Aquaculture is offered in two optional streams, **Freshwater Aquaculture** and **Coastal Aquaculture**. It comprises compulsory core courses on basics of aquaculture (14 credits) and optional courses on two specialized streams of Aquaculture that are fresh water aquaculture (14 credits) and coastal aquaculture (14 credits).
- The basic of aquaculture course for any stream of Diploma in Aquaculture has a compulsory component of 6 credits worth project work.
- Optional freshwater aquaculture and coastal aquaculture courses 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 Garhi, New Delhi-110068

(2026)

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.

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

ENROLMENT NO.:……

NAME :……

ADDRESS :……

……

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COURSE CODE: …….

COURSE TITLE : …….

ASSIGNMENT NO. ……

STUDY CENTRE: ……..….. DATE ……...

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

2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

3) Leave 4 cm margin on the left, top and bottom of your answer sheet.

4) Your answers should be precise.

5) While solving problems, clearly indicate the question number along with the part being solved. Be precise.

6) **This assignment will remain valid for one year from January 1, 2026 to December 31, 2026**. 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)

Course Code: BAQ-002
Assignment Code: BAQ-002/TMA/2026
Maximum Marks: 100

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1. a). Give the common names and scientific names of two Indian major carps and one Chinese carp which are cultured in fresh water. If you were given two carps, how will you know which one is male and which one is female by observing (i) the genital aperture/vent, and (ii) the pectoral fins? (7)

   b). State the specific features which distinguish a mature female carp from a spawning female carp and a spent female carp. (5)

   c). What is meant by 'induced breeding by hypophysation under pond conditions'? Describe the technique. (8)

2. a). Give an account of (i) hapa hatchery, and (ii) control of aquatic weeds in fishery waters. (5)

   b). What do the terms: liming, manuring and stocking of ponds mean? Why are these processes important for fresh water aquaculture? Describe how these processes are carried out. (10)

   c). Differentiate between live bearers and egg layers. (5)

3. Write notes on the following: (5×4=20)

   i). Pearson's square for feed formulation

   ii). Nutrient digestibility

   iii). Prevention of diseases common in prawn hatcheries

   iv). Any two parasites of fin fish and diseases caused by them

   v). Parameters of evaluation of fish feed

4. a). What is a pearl? How is foreign body implanted into an oyster and how does it become a pearl? (10)

   b). What is 'live feed'? Highlight the advantages and the importance of live feed culture for hatcheries. Add a note on culture of any one organism used as live feed. (10)

5. i). How can sewage treatment be carried out with the help of aquaculture? (10)

   ii). What is 'Integrated Fish Farming'? State the basic processes involved in preparing the ecosystem for 'Integrated Fish Farming'. Add few sentences on nutritive values of organic material. (10)