

**DIPLOMA IN AQUACULTURE (DAQ)**

**Term-End Examination**

**June, 2019**

00641

**BAQ-002 : FRESH WATER AQUACULTURE**

*Time : 3 hours*

*Maximum Marks : 100*

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**Note :** *Attempt any five questions. All questions carry equal marks. Support your answers with well-labelled diagrams wherever necessary.*

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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 the phrase '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. 5,5
- (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
3. (a) 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
- (b) List the various culture systems for catfish and write in brief about them. 10
4. (a) Give an account of 'live fish' or airbreathing fish such as Murrels or the airbreathing Anabantids mentioning their habitat and distribution, feeding habits and breathing and reproduction. 10
- (b) What is a pearl ? How is foreign body implanted into an oyster and how does it become a pearl ? 10
5. (a) State the advantages of farming the freshwater giant prawn, *Macrobrachium* and the various types of cultures suitable for it. 10
- (b) How can sewage treatment be carried out with the help of aquaculture ? 10

6. (a) Classify the following fresh water ornamental fish into live bearers and egg layers :  
Guppy, swordtail, tiger barb, molly, goldfish, angel fish, blue gourami, platy. 4
- (b) Differentiate between live bearers and egg layers. 6
- (c) 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
7. Write notes on any *four* of the following : 4×5=20
- (a) Pearson's square for feed formulation
- (b) Nutrient digestibility
- (c) Prevention of diseases common in prawn hatcheries
- (d) Any two parasites of fin fish and diseases caused by them
- (e) Parameters of evaluation of fish feed
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