

DIPLOMA IN AQUACULTURE (DAQ)

Term-End Examination

December, 2017

00151

BAQ-002 : FRESH WATER AQUACULTURE

Time : 3 hours

Maximum Marks : 100

Note : Attempt any **five** questions. All questions carry equal marks. Provide diagrams wherever necessary.

1. (a) Describe briefly the various culture systems for catfish farming in Asia. 10
- (b) How is mass breeding of murrels carried out? 10
2. (a) Prepare a table showing the morphological differences between male and female carp. 12
- (b) Describe the structure and usage of two Hapa hatcheries, one for collecting spawn and the other for collecting hatchlings. 8
3. (a) Name any four aquatic weeds which are undesirable for fishery waters. Describe the methods of aquatic weed control. 12

- (b) What is Integrated Fish Farming ? List the different systems used in it. Write a brief account of any one. 8
4. (a) Describe briefly the following parts of the main hatchery complex of the giant fresh water prawn *Macrobrachium Rosenbergii* : 12
- (i) Broodstock unit
 - (ii) *Artemia* hatching unit
- (b) How does biomineralisation of a pearl take place ? 8
5. (a) Answer in one or two sentence(s) : $5 \times 3 = 15$
- (i) Name the vitamin synthesized by microorganisms in the gut of fish and mention a symptom of its deficiency.
 - (ii) Which factors are responsible for suffocation and death due to asphyxiation of cultured fish ?
 - (iii) What causes Saprolegniasis in fish and why is it called 'cotton mouth' ?
 - (iv) Name any one viral disease of fish and mention its symptoms.
 - (v) Mention any two common symptoms of bacterial diseases in fish.

- (b) Write notes on any **one** of the following : 5
- (i) Feed Formulation
 - (ii) Diseases of Shellfish in Grow-out Systems
6. (a) How do fish ponds serve as facultative ponds for sewage treatment ? 8
- (b) Write a short essay on 12
- Ornamental fish
- OR**
- Culture of Trouts
7. (a) What are Shellfish ? If you were to set up an aquafarm for culturing the Indian river prawn,
- (i) which points will you keep in mind while selecting the site for the hatchery ?
 - (ii) how many hatchery tanks will you construct and what will you use them for ? 12
- (b) How are predatory and weed fishes eradicated from carp ponds ? 8

8. Write notes on any *two* of the following : $2 \times 10 = 20$

- (a) Culturable Air-Breathing Fish
 - (b) Importance of Live Feed in Aquaculture
 - (c) Induced Breeding in Catfish
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