

**DIPLOMA IN AQUACULTURE (DAQ)**

**Term-End Examination**

00342

June, 2017

**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. Provide diagrams wherever necessary.*

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1. (a) Name the various components of a hatchery and mention the function of each component. 8
- (b) Write two sentences on each of the following : 6×2=12
- (i) Split dose
  - (ii) Gonadotropins
  - (iii) Pronucleus
  - (iv) Demersal eggs
  - (v) Zooplankton
  - (vi) Hypophysation

2. (a) Describe the relative advantages of a small and a large pond for culture of carps in an aquafarm. 8
- (b) What is meant by 'Composite carp culture' or 'Polyculture' technology? Write the basic principles of the technique. 8
- (c) List the methods of weed control. 4
3. (a) What are schizothoracids commonly called? Add a note on their spawning behaviour. 3
- (b) Enumerate the various steps taken to revive these fish through artificial propagation. 7
- (c) What is 'live feed culture'? List the advantages of providing cultured live feed in hatcheries. 10
4. (a) Name any four commercially important catfishes suitable for aquaculture. Explain the constraints in exploiting their potential in aquaculture. 10
- (b) Give an account of sewage fed fisheries in India. 10

5. (a) Give the chemical composition of a pearl. Name the three kinds of pearls and point out the differences between them. 8
- (b) Name and describe the three implantation techniques of freshwater pearl culture. 12
6. (a) Name the cause, (whether protozoa, bacteria, virus or nutritional deficiency) and at least one symptom of the following diseases of freshwater fish cultured in aquafarms : 10
- (i) White spot disease
  - (ii) Viral haemorrhagic septicemia
  - (iii) Saprolegniasis
  - (iv) Suffocation
  - (v) Macrocytic anemia
- (b) Write briefly on the following : 4+6
- (i) Nutrient digestibility
  - (ii) Any three hatchery diseases of prawns

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

(a) Methods of culturing giant freshwater prawn — *Macrobrachium rosenbergii*

(b) Role of central nervous system and hypophyseal hormones in inducing reproduction in carps.

8. (a) Give a brief account of the biology of any one of the Chinese carps. 10

(b) List the different ancillary aquaculture practices that are economically viable. Describe the culture of *Trapa bispinosa* (water chestnut). 10

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