

DIPLOMA IN AQUACULTURE (DAQ)

Term-End Examination

December, 2018

BAQ-002 : FRESH WATER AQUACULTURE

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions.

(ii) All questions carry equal marks.

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1. (a) Name the family of fish to which Catla, Rohu and Mrigal belong. Mention their habitat. Also name one Chinese carp cultured in India. Describe the technique of using Pituitary Gland Extract (PGE) in mature brood of fish to induce spawning. 10+10=20
 - (b) What are the requirements of a hatchery ? Draw an outline diagram to depict water quality management in a carp hatchery.

 2. (a) State in ten points the requirements of the 'grow out culture system' used for culturing edible carps. 10+10=20
 - (b) Write notes on any two :
 - (i) Mushroom-fish system
 - (ii) Sewage fed fisheries in India
 - (iii) Culturing ornamental fish for aquaria

3. (a) What is meant by 'Live feed culture' ? Give reasons as to why cultured live feed is preferable to carrying fish feed to aquahatcheries ? $10+10=20$
- (b) Mahseer is a famous 'game fish' and inhabits several rivers of India. Why is it called Mahseer ? Describe briefly its (i) Spawning behaviour and (ii) Artificial propagation.
4. (a) Name any two catfish. How do they breed naturally and how is breeding induced in them through hormonal treatment ? $10+10=20$
- (b) What is the importance of *Azolla* cultivation in fish farming ?
5. (a) Give an account of culture of Indian river prawn *Macrobrachium malcolmsonii*. $10+10=20$
- (b) List the basic steps involved in fresh water pearl culture. How are pearls harvested at the end of the culture period ?
6. (a) Name and give one symptom each of any one : $10+10=20$
- (i) Parasitic disease
 - (ii) Bacterial disease
 - (iii) Viral disease
 - (iv) Fungal disease in fish
- Who should be consulted if fish under culture become diseased ?

- (b) What is the importance of dietary proteins, carbohydrates, vitamins and minerals provided to fish in aquafarms ? Add a note on sources of protein from plants and animals for feeding fish in aquafarms.

7. Answer the following questions related to catfish and some live fish in one or two words or sentences. 2x10=20

- (a) Give the scientific name of the climbing perch.
- (b) What is the function of barbels in catfish ?
- (c) Name a piscivorous catfish.
- (d) How do some catfish survive in water deficient in Oxygen ?
- (e) What are demersal eggs ?
- (f) When the vent of a brood fish is pressed, what comes out in male and female ?
- (g) Why is pituitary extract injected in catfish ?
- (h) Which fish are called snakeheads ?
- (i) Which fish out of the following is **not** piscivorous - *Heteropneustes*, *ompok*, *wallago* ?
- (j) Why is Magur termed as scavenger fish ?
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