

M.Sc. 2nd Semester Examination, 2010
AQUACULTURE MANAGEMENT AND
TECHNOLOGY

PAPER—AMT-1201

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer *four* of the following questions : 2 × 4
- (a) What are the Rotating Biological Contractors (RBC) ?
- (b) State the purposes of removing suspended solids in a Recirculating Aquaculture System (RAS).
- (c) Write the criteria for larval feed selection during marine fish farming.

- (d) What are fouler organism ?
- (e) Compare between domestic sewage and urban sewage.
- (f) Differentiate between extensive and intensive aquafarming.
- (g) Write scientific names of two indigenous cold water fishes.
- (h) What are the constraints of pearl oyster fishery in West Bengal ?

2. Answer any *four* of the following questions : 4 × 4

- (a) Write down the steps for determination of aeration requirement in an aquaculture pond.
- (b) Briefly elaborate the future scope of cold water fish farming in Indian context.
- (c) Give an account on the mariculture system development in India.

- (d) Narrate the characteristic features of sewage water.
- (e) State the commercial uses of sea-weed.
- (f) How would you improve the colour and quality of pearls ?
- (g) What are the criteria of selection of fish species for aquaculture ?
- (h) Determine the flow rate required to flush away the metabolic wastes in an intensive flow through system assuming :

Total Ammonia Nitrogen (TAN) excreted in kg per kg feed protein consumed = 0.0952, total biomass of fish = 100 kg, feed protein consumption in kg per kg of fish per day = 0.01 and tolerable TAN concentration = 1.17 mg/L at 25°C and pH = 7.8.

3. Answer *two* of the following questions : 8 × 2

(a) (i) Prepare a check list of major brackish water shrimp species cultured in South Asian region.

(ii) What are the drawbacks of traditional shrimp farming ?

(iii) Briefly discuss the disease outbreak of freshwater prawn farming. 2 + 2 + 4

(b) Briefly illustrate the different mariculture methods used in Asian region. 8

(c)(i) What do you mean by mullets and murrels ?

(ii) Describe the method of breeding and rearing management of *Ophiocephalus* sp. 2 + (3 + 3)

(d) Write notes on :

4 × 2

- (i) Transport of live fish.
 - (ii) Design, layout and construction of an ideal aquafarm.
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