

2017

M.Sc.

3rd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-303

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Unit-I

(Aquaculture Practices)

1. Answer any *two* of the following questions : 2×2
- (a) What is crab fattening?
- (b) Write scientific name and common name of two live bearing ornamental fishes.

(Turn Over)

(c) Briefly explain the mode of reproduction of oviporous ornamental fishes.

(d) Define biofouling with examples.

2. Answer any *two* questions from the following : 2×4

(a) Briefly elucidate the sea-weed culture in Indian context.

(b) Discuss the guidelines for the approval of SPF (Specific Pathogen Free) of *Litopenaeus vannamei*.

(c) Write a note on Lobster culture.

(d) How would you develop the colour and quality of cultured pearl?

3. Answer any *one* of the following questions : 1×8

(a) Define mariculture. Write a brief account on future of mariculture in India. Explain the Constraints of mariculture. 1½+3½+3

(b) Write short notes : 2×4

(i) An overview of global aquaculture production.

(ii) Present status of ornamental fish trade in India.

Unit-II

(Fish Nutritions and Bioenergetics)

4. Answer any *two* of the follow questions : 2×2
- (a) Define digestibility (%).
 - (b) What do you mean by optimal foraging theory ?
 - (c) State about essential amino acid requirement in IMC.
 - (d) What is hydrostability of fish feed ?
5. Answer any *two* of the following questions : 2×4
- (a) Discuss in detail about different types of energy utilization in fish.
 - (b) Enumerate the nutritional deficiencies and symptoms in fish.
 - (c) State the vitamin requirement in shrimp feed.
 - (d) Write down the carbohydrate metabolism process in fish.
6. Answer any *one* question of the following : 1×8
- (a) (i) What do you mean by feed additives ?
 - (ii) Enlist different types of feed additives.
 - (iii) Add a note on feed storage 2+3½+2½

- (b) (i) Enlist different non-conventional fish feed resources used for aquafeed preparation.
- (ii) Define Absolute Growth Rate and Specific Growth Rate of fish.
- (iii) FCE, and PER are proportional to each other—
—Explain. $3\frac{1}{2}+2+2\frac{1}{2}$
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