

2019

B.Sc.

2nd Semester Examination

**AQUACULTURE MANAGEMENT
(Honours)**

Paper - C4T

(Genetics and Reproduction in Fish)

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

1. Answer any *five* questions : 5×2=10
- (a) What do you mean by inbreeding depression?
 - (b) What is the importance of crossing over?
 - (c) Write a note on sexual dimorphism in fish.
 - (d) Write a short note on types of fish eggs.
 - (e) What is parental care? State its importance in fish.

[Turn Over]

(f) Write a short note on multiple alleles with examples.

(g) What do you mean by transgenic fish?

(h) Name two cryoprotectant used to preserve fish spermatozoa.

2. Answer any *four* of the following : $4 \times 5 = 20$

(a) Give an account of different maturity stages of fish.

(b) What are linked genes? How can linked genes be separated?

(c) What is genome? Briefly describe the process of gynogenesis in fish $1+3$

(d) Briefly describe the oogenesis in fish with suitable diagram.

(e) Describe gene mutation and its consequences.

(f) Write a note on sex reversal in fish with its importance.

3. Answer any *one* question : $1 \times 10 = 10$

(a) Write note on the following :

(i) Hermaphroditism in fish.

- (ii) Ecological factors influencing gonadal development in fish. 5+5
- (b) (i) Briefly discuss on the brood fish management of carps.
- (ii) Write a note on selective breeding in fish.
- (iii) What is polyploidy? State its importance in aquaculture. 4+3+(1+2)
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