

2019

Major 3rd Semester Examination

INDUSTRIAL FISH AND FISHERIES

Paper - C 5-T

(Fish Genetics Endocrinology and Reproduction)

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.*

Answer all questions.

1. Answer *any five* questions from the below : $5 \times 2 = 10$
- (a) What is crossing over ? 2
 - (b) Define non-sister chromatids. 2
 - (c) Define endocrine gland with examples. 2
 - (d) What is inbreeding depression ? 2
 - (e) What is spawning ? 2

[Turn Over]

- (f) Write name of four hormones secreted from pituitary gland of fishes. 2
- (g) What is DNA library ? 2
- (h) Define hybrid fish with example. 2

2. Answer *any four* questions : 4×5=20

- (a) Briefly explain cloning method with example. 5
- (b) Describe sex-reversal process with proper illustration. 5
- (c) Compare among features of gravid and sexually immature fish. 5
- (d) Briefly discuss breeding behaviour of any two fishes. 5
- (e) How does pheromones affect the fishes ? Explain with example. 5
- (f) Briefly narrate the hormonal impact on maturation and spawning of fishes. 5

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

(a) (i) What is transgenic fish ?

(ii) Briefly describe the method of production of transgenic fish.

(iii) State the merit and demerit of transgenic fishes. 2+5+3

(b) Short notes :

$2\frac{1}{2} \times 4$

(i) Recombinant DNA

(ii) Gene therapy

(iii) Thyroid gland of fish

(iv) DNA fingerprinting.
