

Total Pages—4

PG/IIS/AMT-203/14

M.Sc. 2nd Semester Examination, 2014

**AQUACULTURE MANAGEMENT AND
TECHNOLOGY**

(Fish Breeding and Hatchery Management)

PAPER – AMT - 203

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 any *four* of the following : 2 × 4
- (a) Enlist Different synthetic hormones used in fish breeding.
 - (b) Briefly write on fecundity in fish.
 - (c) What is bundh breeding ?

(Turn Over)

(2)

- (d) Define inbreeding and cross breeding.
- (e) How mortality of fish seed during transportation can be minimised ?
- (f) Write short notes on Robertsonian rearrangement.
- (g) State the advantages and disadvantages of fish hybridization.
- (h) What do you mean by reciprocal translocation ?

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

- (a) Discuss monosex production of fish population. 4
- (b) Write a note on selective breeding in fish. 4
- (c) Briefly discuss brood stock management of IMC. 4
- (d) Write a note on polyploidy in fish. 4

(3)

- (e) Show schematically the components of teleostean hypophysis and name the secretions. 2 + 2
- (f) Discuss different methods of fish seed transportation. 4
- (g) Write different methods of collection of fish seed from natural sources. 4
- (h) Discuss the advantages and disadvantages of synthetic hormones used in fish breeding. 4
3. Answer any *two* of the following : 8 × 2
- (a) Describe the hormonal control of vitellogenesis in teleost fish. Discuss the annual cyclical changes of fish ovary. 4 + 4
- (b) Define mutation. Discuss different types of mutations and their mechanisms. 2 + 3 + 3
- (c) Write short notes on : 4 + 4
- (i) Chromosomal polymorphism in fish
- (ii) Final maturation in post-vitellogenic oocytes.

(4)

(d) What is hypophysation technique ? Illustrate the procedure of hypophysation followed for fish breeding. Add a note on its advantages and disadvantages. 2 + 4 + 2
