

M.Sc.

2016

2nd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-202

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

(Hatchery Management)

1. Answer any *two* questions from the following : 2×2
 - (a) Explain different units of carp eco-hatchery with suitable diagram.
 - (b) Write short note on transportation of live fish.

(Turn Over)

- (c) What are the natural food of carp larvae ?
- (d) Mention the operation management of circular glass jar incubation units.

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

- (a) Describe the preparation of a carp nursery pond.
- (b) Write a note on brood stock management of fresh water prawn.
- (c) Discuss in brief the advantages of rearing the fish larvae on formulated diet.
- (d) Briefly write a note on aeration system and water exchange in a carp hatchery.

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

- (a) (i) Write down the principles of biosecurity methods in hatchery system.
- (ii) Discuss the methods of reduction of the risk of pathogen introduction into a hatchery facility.

3+5

- (b) (i) Calculate the dimension (diameter) of a chinese circular incubation pool with capacity to incubate 1 crore eggs.

- (ii) Give an account of design and construction of Gaint Fresh Water prawn hatchery 4+4

Unit—II

(Fish breeding)

4. Answer any *two* questions from the following : 2×2
- (a) What do you mean by bundh breeding?
 - (b) Explain chromosomal polymorphism in fish.
 - (c) Write short note on GnRH analogue.
 - (d) What is Robertsonian rearrangement?
5. Answer any *two* questions from the following : 2×4
- (a) Briefly discuss GSI and fecundity in fish.
 - (b) Write down the charecteristics of different stages of teleostean oocytes.
 - (c) Briefly discuss hybridization in fish.
 - (d) Write a note on need of genetic improvement of fish seed.

6. Answer any *one* question of the following : 1×8

(a) (i) Give an account of early gonadal maturation by photo-thermal manipulations.

(ii) Write a note on final maturation of post-vitellogenic oocytes. 4+4

(b) (i) 'Oocyte envelope is steroidogenic in nature'. — Discuss.

(ii) Briefly describe the hormonal control of Vitellogenesis in teleost fish. 4+4
