

M.Sc.

2015

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) Mention different units of a carp hatchery complex.
 - (b) How would you minimize the mortality during transportation of fish seed?

(Turn Over)

- (c) Write a short note on types of carp hatchery.
- (d) Point out the difference between opportunistic and obligate pathogen.
2. Answer any *two* questions from the following : 2×4
- (a) Write the management practices to be followed during operation of spawning and incubation pool.
- (b) How will you reduce the pathogen spread in a culture system ?
- (c) What will be a suitable site for construction of a carp hatchery complex ?
- (d) (i) State the ideal water quality characteristics in an incubation pool.
- (ii) Write the advantages of rearing carp larvae on formulated feed. 2+2
3. Answer any *one* question of the following : 1×8
- (a) (i) Calculate the dimension (diameter) of a chinese circular incubation pool with capacity to incubate 60 lakh eggs.
- (ii) Write a note on different methods of fish seed transportation. 4+4

- (b) (i) Calculate the dimension (diameter) of a chinese circular spawning pool with production capacity of 60 lakh eggs.
- (ii) What are the behavioral and physical signs of broad fish when it is under stress? Explain it briefly. 4+4

Unit—II

(Fish breeding)

4. Answer any *two* questions from the following : 2×2
- (a) Write the characteristics of stage III oocyte of teleost fish.
- (b) What do you mean by absolute and relative fecundity ?
- (c) Enlist the hormones secreted by proximal pars distalis of hypophysis.
- (d) What is GIFT tilapia ?
5. Answer any *two* questions from the following : 2×4
- (a) What is inbreeding depression? How will it be overcome? Explain. 1+3
- (b) Oocyte envelop is steroidogenic in nature. Explain.

(c) Briefly discuss on polyploidy in fish and its utility in Aquaculture.

(d) Write a note on offseason breeding of carps.

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

(a) Describe the hormonal control of post vitellugenic oocyte. Explain final maturation in a teleost oocyte.

4+4

(b) (i) Define gynogenesis.

(ii) Give an account of induced gynogenesis in fish.

(iii) Add a note on its importance. 2+4+2