2018

M.Sc.

2nd Semester Examination

FISHERIES SCIENCE

PAPER—FSC-202

Subject Code—28

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.

Illustrate the answers wherever necessary.

Unit—I

(Fish Breeding)

1. Write short note on any *two* of the following questions : 2×2

(a) Hermaphroditism in fish.

(b) Bundh breeding.

(c) Effect of temperature on fish reproduction.

(d) Fecundity.

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

(a) Describe the role of pineal hormone in fish reproduction.

(b) Oocyte envelope is steroidogenic in nature. Briefly explain with suitable diagram.

(c) State the mating pattern exhibited by fishes.

(d) Write a note on the different stages of oocyte during an ovarian cycle of a tropical teleostean fish.

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

(a) Describe the neuro-endocrine regulation of ovulation and spawning in fish. Add a note on photo tharmal manipulation for early gunadal maturation. 4+4

(b) (i) Give an account of alternative synthetic agents used in fish breeding.

(ii) Discuss the advantage and disadvantage of Hypophysation techniquee. 4+4

Unit—II

(Hatchery Design and Management)

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

(a) Suitable site for carp hatehery.

(b) Natural food of carp larvae.

(c) How do you detect the fish under stress ?

(d) Transportation of fish seed.

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

(a) Write a note on fish seed certification and quarantine measures.

(b) Write short note on SPF and SPR brood fish.

(c) Write the management practices to be followed during operation of incubation pool.

(d) Explain the parts of ECO hatchery complex with suitable diagram and labellilng.

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

(a) (i) Calculate the dimension of an incubation pool with capacity to incubate 1 crore eggs.

(ii) Calculate the brood fish and brood rearing pond area requirement for the production of 1 crore spawn of *labeo rohita* in a season. 4+4

(b) (i) State the principles of biosecurity.

(ii) Describe different biosecurity measures to be followed in a freshwater fish hatchery and farm.

2+6

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