

**U.G. 5th Semester Examination - 2024****ZOOLOGY****[HONOURS]****Discipline Specific Elective [DSE]****Course Code : ZOOL-H-DSE-T-01****(Fish & Fisheries)**

Full Marks : 40

Time : 2½ 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.*

1. Answer any five questions:

2×5=10

- a) Define osmoconformer. Give example.
- b) What is the role of swim bladders in fish buoyancy?
- c) Name one hormone which induce oocyte maturation.
- d) Differentiate between extensive and semi-intensive fish culture.
- e) What are the main bacterial diseases of fish?

*[Turn Over]*

- f) Define composite fish culture.
- g) Name one fish by-product and mention its utility.
- h) Write down two advantages of intensive aquaculture.

2. Answer any two questions:  $5 \times 2 = 10$

- a) Write the structure of electric organ with suitable diagram in *Torpedo*. What are the functions of electric organs?  $3+2$
- b) Define stenohaline and euryhaline. Describe osmoregulation in Elasmobranch.  $3+2$
- c) Describe the types and structure of gills in fish.
- d) Discuss the reproductive strategies of Indian fish, focusing on oviparous and viviparous species.  $3+2$

3. Answer any two questions:  $10 \times 2 = 20$

- a) What is induced breeding? Briefly write about the collection, preservation and storage of pituitary gland. Write down the dosage with amount given to male and female fishes. Name two synthetic hormones used for induced breeding.  $2+3+3+2$

- b) What is catamaran? How it is prepared? Write is short about Dip net and Cast Net. What is Masula boat?  $2+2+2\frac{1}{2}+2\frac{1}{2}+1$

- c) What is transgenic fish? How will you produce transgenic fish? Write its application in aquaculture and mention its disadvantages to handle this fish. Name one center in our country where current ongoing programmes on production of transgenic carp and catfishes are going on.  $2+3+2+2+1$

d) Write short notes on any two:  $5+5=10$

- i) Cage culture
- ii) Zebra fish as a model organism in research
- iii) Physoclistus swim bladder
- iv) Omnivorous fishes
- v) Differences between Chondrichthyes and Osteichthyes.