2025

MIDNAPORE CITY COLLEGE ESTD 2017 CENTRAL LIBRARY

1st Semester Examination

M.F.Sc. in Aquaculture

Paper : AQC 503-T

(Hatchery Technology for Finfishes and Shellfishes)

Full Marks : 70 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any *five* questions : 2×5=10

1. Mention the merits and demerits of the wild seed collection process.
2. Name two common anaesthetic drugs used to reduce stress during fish seed transport.
3. What do you mean by inbreeding depression?
4. Mention the uses of PIT tagging in brood stock.
5. Define Gonadosomatic Index (GSI).

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6. Why is a dopamine antagonist used alongside GnRH as inducing agents?

7. What is GVBD? Explain.

8. How do you determine the quality of milt?

Group - B

Answer any *six* questions : 5×6=30

9. How does photoperiod affect the fish reproduction?

10. Give a layout and workflow of a Chinese circular hatchery for IMC.

11. Illustrate the process of oogenesis in teleost fish.

12. Mention the different criteria for site selection of a shellfish hatchery.

13. Write the importance of Better Management Practices for sustainable aquaculture.

14. What is Biosecurity? Write down the principles of biosecurity in fish farming. 2+3

15. Give a brief account of the reproductive cycle of murrels.

16. Determine the required diameter of a circular spawning tank for a hatchery targeting the production of 50 lakh eggs in a single cycle.

17. What is eye stalk ablation? Briefly describe the seed production procedure of *Macrobrachium rosenbergii*. 2+3

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18. How do the nutritional factors affect gonadal maturation and reproduction in fish? Add a brief note on importance of 'brood stock management'. 3+2

Group - C

Answer any ***one*** question : 10×1=10

19. Define cryopreservation. Differentiate between "extender" and "cryoprotectant". Discuss the procedure of the cryopreservation technique. 2+3+5

20. Discuss the concepts of Specific Pathogen Free (SPF) and Specific Pathogen Resistant (SPR) seed in aquaculture. Explain the different methods of fish seed transportation practiced in India. 4+6

[Internal Assessment : 20 marks]
