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PG/1st Sem/AQC/25

2025

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1st Semester Examination

M.F.Sc. in Aquaculture

Paper : AQC 501-T

(Freshwater Aquaculture Production Systems)

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. Differentiate between cage culture and pen culture.
2. What are the advantages of raceway farming systems?
3. What is a flow-through aquaculture system?
4. Mention the principle of Bio-floc technology used in aquaculture.
5. What is the "Depuration process" in wastewater-fed aquaculture?
6. State the primary ecological advantages of Composite Fish Culture technique.

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7. Give scientific name of the freshwater pearl producing oyster. What is nacre? 1+1

8. Give the scientific names of one Snakehead and one Featherback commonly used in Indian aquaculture.

Group - B

Answer any *six* questions : 5×6=30

9. What do you mean by "Integrated Multi-Trophic Aquaculture" (IMTA)? How does it differ from traditional polyculture? 2+3

10. Briefly explain the importance of "Species Selection" and "Crop Planning" in achieving high economic returns. 2½+2½

11. Distinguish between extensive, semi-intensive and intensive aquaculture systems.

12. Give an account of eradication of aquatic weeds and weed fishes during the pre-stocking operation of nursery pond for Indian Major Carps. 2+3

13. Define monosex culture. What are the advantages of monosex culture? 2+3

14. Discuss the major challenges of prawn farming in India.

15. Write a note on simultaneous and rotational rice-cum-fish farming process.

16. What is trickling filter? Mention the role of oxidation pond in waste water aquaculture. 2+3

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17. Explain the basic principles and essential components of a 'Recirculating Aquaculture System' (RAS).

18. Discuss the specific criteria for species selection in wastewater-fed aquaculture.

Group - C

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

19. Critically evaluate the environmental merits and the public health demerits associated with wastewater-fed aquaculture systems. Add a brief note on 'Aquaculture-based Sewage Treatment Plant'. (3+3)+4

20. Give an account of site selection, pond preparation and feeding management of 'scampi' culture. 3+4+3

[Internal Assessment : 20 marks]

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① Disease Attacks

⑪