



25047633

**QP CODE: 25047633**

**Reg No** : .....

**Name** : .....

**M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025**

**Third Semester**

M.Sc Fishery Biology and Aquaculture

**Core Course - AQ030302 - PATHOLOGY, MICROBIOLOGY AND IMMUNOLOGY**

2019 ADMISSION ONWARDS

58123406

Time: 3 Hours

Weightage: 30

**Part A (Short Answer Questions)**

*Answer any **eight** questions.*

*Weight **1** each.*

1. Differentiate between infectious and non infectious diseases.
2. What is Proriza larva?
3. Write a note on brown spot disease in shellfishes.
4. Name five tumors of mesenchymal origin in fishes.
5. Write a short note on bacterial flagella.
6. Give a short note on streaking process.
7. Define microbiology.
8. What are vaccines?
9. What are antibodies?
10. What are B cells? Add a note on their role in fish defense.

(8×1=8 weightage)

**Part B (Short Essay/Problems)**

*Answer any **six** questions.*

*Weight **2** each.*

11. Give an account on IPN and VHS diseases in fishes.
12. What are the major fungal diseases of fishes.
13. Explain the life cycle of Apicomplexa





14. What are the different methods of treating fish diseases by adding chemicals to water ?
15. Write a short note on the physical factors which affect the growth and metabolism of bacteria.
16. Give a comparative account on innate immunity and adaptive immunity.
17. Distinguish between Direct ELISA and Indirect ELISA.
18. Write a note on complement fixation test.

(6×2=12 weightage)

**Part C (Essay Type Questions)**

*Answer any **two** questions.*

*Weight 5 each.*

19. Give an account on parasitic adaptations.
20. Give a comparative account on the life cycle of Digenea and Cestoda.
21. Write an essay on seafood toxins.
22. Give an account on the role of complement system in defense mechanism in fish.

(2×5=10 weightage)

