



QP CODE: 21102948



21102948

Reg No : .....

Name : .....

**B.Sc DEGREE (CBCS) EXAMINATIONS, OCTOBER 2021**

**Fourth Semester**

B.Sc Zoology Model II Aquaculture

**Vocational Course - ZA4VOT08 - MICROBIOLOGY, PATHOLOGY AND POST  
HARVEST TECHNOLOGY.**

2019 Admission only

E2585B5F

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Distinguish between Mesophilic and Psychrophilic bacteria.
2. How are bacteria classified based on their oxygen and temperature requirements?
3. Explain preparation any one of the culture of media.
4. What are the Post Mortem changes in fishes?
5. What is Autolysis?
6. Briefly explain any two thawing methods.
7. Write a brief note on Irradiation.
8. Distinguish between soft swell and hard swell in canning.
9. Comment on smoke curing and its disadvantages.
10. What is dun spoilage?
11. Write a brief note on Dactylogyrosis, symptoms and treatment.
12. What is biological hazard? Give example.

(10×1=10)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Give an account on sterilisation technique using Dry heat.





14. What is Gram Staining? Explain the principle and procedure of Gram staining.
15. What are indices of spoilage? Briefly explain the different indices of spoilage in fishes.
16. Explain the process of freezing with the help of a freezing curve.
17. Distinguish between immersion freezing and cryogenic freezing methods.
18. Explain Tunnel Freezers and Fluidised bed freezers.
19. Explain any five commercially important fishery by products. Mention their uses.
20. Explain bacterial diseases in fin fishes.
21. Explain major nutritional deficiency diseases in fish.

(6×5=30)

### Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Give an account on important bacteria of sanitary significance and faecal indicator organisms.
23. Explain the procedure of canning and advantages of canning over other methods of preservation. Write notes on common defects in canning.
24. Describe value addition. Give details on various value added products from fishery sector.
25. Give an account on viral and bacterial diseases of shrimp.

(2×10=20)

