

M. Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2021**SEMESTER 4 : AQUACULTURE AND FISH PROCESSING****COURSE : 16P4AQCT14 : FISH MICROBIOLOGY AND QUALITY ASSURANCE***(For Regular - 2019 Admission and Supplementary - 2018/2017/2016 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 8 (2 marks each)**

1. How histamine is formed in scombroid fish?
2. What are the different types of flagellation in bacteria?
3. What is differential media? Give two examples.
4. What is pili and the importance of sex pili?
5. What is flat sour?
6. What is nisin?
7. Explain the major difference between quality control and quality assurance.
8. What is the importance of peroxide value?
9. Expand BIS, US FDA.
10. What is meant by botulism?
11. Expand FSSAI.
12. Inprocess quality control

(2 x 8 = 16)**PART B****Answer any 7 (5 marks each)**

13. What are the different methods used for sterilization?
14. Describe the principle of acid fast staining reaction.
15. Effect of salt curing on bacteria.
16. Which are the seven principles of HACCP?
17. Sensory evaluation for prawn
18. Explain the quality of water and ice used in seafood processing industry.
19. Write on physical hazards in fish
20. Classify hazards in seafoods. Give examples for each
21. Bacteriological standards of seafood for export.
22. Elaborate on GMP in seafood industries

(5 x 7 = 35)**PART C****Answer any 2 (12 marks each)**

23. Explain the effect of different processing methods on bacteria present on fish.
24. Describe the classification of bacteria.
25. Write on different methods available on quality evaluation of fish
26. Write on quality management and ISO 9000 standards.

(12 x 2 = 24)