

SECTION-A

Answer any FIVE of the following.

5X4=20

Draw a neat labelled diagram wherever necessary.

1. Scope of biotechnology in fisheries.
2. Single-cell proteins.
3. Immunostimulants.
4. Primary cell culture.
5. Bioactive compounds.
6. Treatment for wastewater
7. Psychrophiles role in food spoilage
8. GMP.

SECTION-B

Answer any FIVE of the following

Draw a neat labelled diagram wherever necessary.

5X8=40

9. a) What is transgenesis and explain about process of production of transgenic fishes.
(or)
b) Write an essay on the principles and application of biotechnology on fish feeds.
10. a) What are pro and prebiotics and explain the types of probiotics and Prebiotics used in aquaculture.
(or)
b) Describe the process of bioremediation in the aquaculture system.
11. a) Write an essay on the commercial importance of enzymes, hormones, and therapeutic proteins.
(or)

b) Write an essay on the types of vaccines and methods of vaccine administration fishes.

12. a) Write an essay on the role of microbes in food spoilage and food poisoning.
(or)

b) Write an essay on the role of halophiles and thermophiles in fish spoilage.

13. a) Explain the types of fish spoilage and microbes spoilage in processed and semi-processed fish products.

(or)

b) Write an essay on principles and quality control by HACCP.