2023

BFSC 5th Semester Examination

(Microbial and Parasitic Diseases of Fish and Shellfish)

PAPER — BFSC-501

Indrajit

Full Marks : 50

Time : 2 hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

1. Answer *any* **ten** from the following questions : 2×10=20

(a) Write down the causative agents of dropsy and EUS.

(b) Write on the two control measures taken during cotton wool diseases in fish.

(c) Explain the importance of disease surveillance in aquaculture.

(d) What is the importance of quarantine in aquaculture?

(e) Briefly outline two key health management strategies employed in aquaculture to promote disease prevention.

(f) Write down the function of immunostimulants in aquaculture.

(g) State two advantages of using bioremediation techniques in the treatment of polluted water bodies.

(h) Write the role of probiotics in health management of fish.

(i) Differentiate between Good Management Practices (GMP) and Best Management Practices (BMP) in aquaculture.

(j) Define SPF and SPR in aquaculture.

(k) Enumerate two biosecurity measures that focus on minimizing the risk of disease transmission in aquaculture.

(l) Define WSSV in shrimp and mention one preventive measure against this disease.

(m) What is Sanitary and Phytosanitary (SPS) Agreement?

(n) Name two environmental management practices that contribute to disease control in aquaculture.

(o) Provide two examples of zoonotic diseases that can affect both aquatic animals in aquaculture and humans.

2. Answer *any* **six** from the following questions : 5×6=30

(a) Write a note on fish immunostimulants. 5

(b) Name one infectious disease in shrimp with causative agents, symptoms and control measures. 1+1+1+2=5

(c) State the damages caused by *Argulus* in carps and mention some phytoremedial measures. 2+3=5

(d) State the life cycle of *Lernaea* sp. with suitable diagram and mention some remedial measures against the parasites. 3+2=5

(e) Write a short note on IHHNV. 5

(f) How does the presence of biofilm contribute to the overall health of aquatic ecosystems and what role does it play in supporting various organisms? 5

(g) In the context of aquaculture, what are the key benefits of biofloc systems in terms of water quality management and the overall health of cultured aquatic species? 5

(h) What role does periphyton play in maintaining ecological balance in freshwater environments and how does it contribute to the health of aquatic organisms? 2+3=5

(i) Define probiotics. What are the potential benefits of using probiotics in aquaculture? 2+3=5

(j) Write the ideal characteristics of vaccines used in world aquaculture practice. 5

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