



**FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY**

**Academic Year 2023/2024**

**Bachelor of Science Honors in Fisheries and Marine Sciences Degree**

**Level III Semester II Examination – April/May 2025**

**FAQ 3213: Fish Pathology and Parasitology**

**Time: 2 hours**

**Answer any four (04) questions.**

01. a) Why are viruses classified in a unique taxonomic category within their own kingdom? (20 marks)
- b) List out the viral diseases of fish as stated by Office International des Epizooties (OIE). (20 marks)
- c) "Carp are susceptible to several viral diseases, which can cause significant economic losses in aquaculture." Justify the statement given providing suitable examples. (60 marks)
02. a) Write the infection cascade that has to be followed by a pathogen when causing disease in fish. (05 marks)
- b) Differentiate disease transmission methods of fish. (05 marks)
- c) Propose how disinfection and biosecurity measures in a fish farm can prevent disease outbreaks within the farm. (20 marks)
- d) "Several pathological changes which can be observed externally can be used as an initial approach to identify fish diseases." Justify this statement with appropriate examples. (70 marks)

03. a) Compose an essay on the factors contributing to outbreak of diseases in fish farms.

(50 marks)

b) During a routine inspection, a fish farmer identified a group of fish with white pustules on the skin. Summarize the information on the possible causative agent, focusing on their life cycle, clinical signs and potential treatments.

(50 marks)



04. a) Justify the following statements.

- i. Proper water management practices in aquaculture farms can interrupt pathogen pathways to fish.
- ii. Some therapeutic agents used to treat fish can be lethal to them if not administered correctly.
- iii. Record keeping plays a crucial role in both the prophylaxis and therapy in prevention and control of fish diseases.
- iv. Some external treatment methods used for fish diseases can have negative impacts on culture systems.

(50 marks)

b) With the aid of an appropriately constructed table, compare the bacterial diseases in which the gills of fish and shrimps are one of the targeted organs. Mention the disease, host organism, causative pathogenic bacteria and four clinical signs of each disease.

(50 marks)

05. Write short notes on the following.

- a) Important background information to investigate the reasons for fish kills
- b) White spot syndrome virus (WSSV) in shrimps
- c) Do's and Don'ts when applying external treatment methods to fish
- d) Infection routes of pathogens in fish.

(100 marks)

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