



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE**  
**DIPLOMA IN FISHERIES AND AQUACULTURE**  
**FIRST SEMESTER 2022/2023**  
**(SEPTEMBER - DECEMBER, 2022)**

**FIAQ 0114: FISH DISEASES AND PARASITES**

**STREAM: Y2 S1**

**TIME: 2 HOURS**

**DAY: WEDNESDAY, 9:00 A.M – 11:00 A.M**

**DATE: 07/12/2022**

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**INSTRUCTIONS:**

- 1. Do not write anything on this question paper.**
- 2. Answer Question ALL Questions in section A (Compulsory) and any other TWO Questions in section B.**

**SECTION A: 40 MARKS**

1. Explain THREE factors contributing to fish diseases in aquaculture.
2. Explain the implications of the following in respect to fish diseases:
  - I. Primary host
  - II. Intermediate host
  - III. Reservoir host
3. Define the following terms:
  - I. Disease
  - II. Parasite
  - III. Life cycle
4. Distinguish between direct and indirect life cycles of parasites in fish.
5. List the causative agents and clinical signs of two fungal diseases.
6. In which fish tissues would you expect to find the following parasites:
  - I. Apiosoma
  - II. Trypanosome
  - III. Ichthyobodo

- IV. Trichodina
  - V. Lernaea
  - VI. Monogenean trematode
7. Explain the role of the environment on the health status of fish.
  8. Describe briefly one genus of fish parasites in each of the following phyla of protozoans:
    - I. Ciliophora
    - II. Sarcomastigophora
  9. List three viral diseases and explain their symptoms.
  10. Name an important parasite from each of the following group of animals:
    - I. Helminthes
    - II. Crustacean
    - III. Mollusca
  11. State THREE types of ichthyozoonotics and name the causative agent associated with each.
  12. Distinguish between monogenean and digenean fish parasites.
  13. With examples, illustrate how abiotic factors cause diseases in fish.

**SECTION B: 30 MARKS**

14. An intensive fish farmer has recently stocked one of the ponds with fish from another fish farm. The fish were stocked directly upon arrival into the pond. After one week of stocking, the owner noticed that some fish had white spots on the surface. Shortly after, the farmer noticed the fish jumping to the water surface to gulp for oxygen. Within three weeks after stocking, mortalities were recorded; with young fish dying more frequently than older ones. The farmer lost more than half of the stock within six weeks of stocking. A fish health personnel from the county government was called to assess and help control the situation. Assuming that you were the fish health personnel:
  - I. Give a critical assessment of the above situation.
  - II. Explain the procedure you would follow to investigate the above problem and how you would help to manage it.
15. Give a detailed account of Costiasis disease.
16. Describe how you would go about diagnosing nutritional disorders in aquarium fish.