

NATIONAL UNIVERSITY OF LESOTHO
FACULTY OF AGRICULTURE
DEPARTMENT OF ANIMAL SCIENCE
ANS 2501: INTRODUCTION TO AQUACULTURE
SUPPLEMENTARY EXAMINATION

AUGUST, 2023

MARKS: 100

TIME: 3:00hrs

Instructions

- **Answer all questions**
- **Points should be bulleted**
- **Start every question on new page**

Question 1

- a) Define the following terms (5 marks each)
 - i) Hydroponics
 - ii) Brood stock
 - iii) Aquaponics
 - iv) Fecundity
 - v) Nares
- b) Suppose the farmer is interested in pig production, at the meantime there is finding that support fish farming. Why would you advise him/her to opt for fish farming? (15 marks)

Question 2

- a) Differentiate between the following terms.
 - i) IAA and RAS (4 marks)
 - ii) Intensive production system and extensive production system (4 marks)
- b) Mr. Bee stocked his pond with tilapia fingerlings while water quality parameters were in favorable conditions. Unfortunately the following morning he experienced total death. Which parameters are responsible for this and how did they cause death? (12 marks)

Question 3

Aquaculture is a favorable enterprise in non-arable land. What are the factors to consider during the site selection for pond construction? (20 marks)

Question 4

Mr. Fish is interested in water based aquaculture but lacks knowledge on how it works. As an aquaculturist which areas would you concentrate on as an advice to him? (20 marks)

Question 5

- a) During ration formulation in fish production, concentrates are required as source of energy in the diet. Discuss five factors that affect energy requirement in fish (15 marks)
- b) Describe functions of the following (1 mark for each)
 - i) Photoreceptors
 - ii) Gills
 - iii) Swim bladder
 - iv) Monk
 - v) Collars