



TECHNICAL UNIVERSITY OF MOMBASA

School of Humanities and Social Sciences

Department of ENVIRONMENT & Health Sciences

UNIVERSITY EXAMINATION FOR THE DEGREE OF: BACHELOR OF SCIENCE IN FISHERIES AND OCEANOGRAPHY (BSFO 22S/YEAR 4/SEMESTER 1)

AFO 4401: AQUACULTURE PRACTICES AND DEVELOPMENT

END OF SEMESTER EXAMINATION

SERIES: AUG 2024

TIME: 2 HOURS

DATE: Pick Date Aug 2024

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt Choose instruction.

Mobile phones are NOT allowed in the examination room

Do not write on the question paper.

SECTION A (Answer all the questions)

30 POINTS

QUESTION ONE

- Briefly explain the difference between extensive, semi-intensive and intensive aquaculture systems giving examples in each case (6 mks)
- Differentiate between organic and inorganic fertilizers (4 mks)
- Briefly explain the preference for live feeds in hatcheries as opposed to formulated feeds (5 mks)
- State and explain the significance of fish sampling in aquaculture (5 mks)
- Explain any three methods through which fish naturally defend themselves against infection (6 mks)
- Outline different methods used for sex reversal in tilapia (4 mks)

SECTION B (Answer only TWO questions)

QUESTION TWO (20 Marks)

- a) Use Pearson square method to calculate the proportion of black soldier fly (60% Crude protein content) and rice bran (8 % crude protein content) required to make a feed with 30% crude protein content (10 mks).
- b) Briefly outline the differences in the culture of cold water and warm water species (10 mks)

QUESTION THREE(20 Marks)

Discuss any ten requirements for a successful fish hatchery (20 mks)

QUESTION FOUR (20 Marks)

- a) Briefly discuss any five causes of stress to fish in culture facilities (10 mks)
- b) Discuss the consequences of predators in fish farming systems (10 mks)

QUESTION FIVE (20 Marks)

- c) Globally, aquaculture did not grow at the same pace as agriculture. Explain (10 mks)
- d) State and explain any five factors determining the selection of an aquaculture system (10 mks)