

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURE AND FOOD SCIENCES

YEAR III SEMESTER 2 EXAMINATION FOR THE DEGREE IN FOOD SECURITY

SBI 3424: AQUACULTURE AND APICULTURE

MAIN EXAMS

DATE: APRIL, 2025

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and Any Other TWO Questions.

QUESTION ONE – 30 MARKS

1. Define the following terms

- | | |
|--------------------------------|---------|
| I. Fish gear | 1 mark |
| II. Fish vessel | 1 mark |
| III. Ecosystem | 1 mark |
| IV. Food web | 1 mark |
| V. Aquaculture | 1 mark |
| VI. Predator-prey relationship | 1 mark |
| VII. Malnutrition | 1 marks |

2. Discuss the importance of aquaculture sustainability in achieving Sustainable Development Goals (SDGs). 3 Marks

3. List four important of freeboard in pond construction 2 marks

4. State three benefits of a gentler fish pond slope 3 marks

5. List four disadvantages of chemical treatments in aquaculture 3 marks

6. Fish disease prevention is better than cure. Discuss 4 marks

7. List six bottlenecks of natural incubation of tilapia fingerlings production 3 marks

8. Describe the management of ammonia levels in fish pond 3 marks

9. State four important of liming in aquaculture 2 marks

QUESTION TWO

1. Describe three criteria for the ideal fishing gear for sustainable fisheries management 6 marks
2. Discuss conventional and non-conventional predator-prey relationship 4 marks
3. Discuss five fish diseases associated with the physicochemical properties of fish pond water 10 marks

QUESTION THREE

1. Discuss three technical measures used to manage fisheries in Lake Victoria 6 marks
2. Explain two classifications of fishing gears in capture fisheries and give two examples of each 8 marks
3. Discuss semi-artificial propagation of African catfish in fingerlings production 6 marks

QUESTION FOUR

1. Discuss four methods for controlling tilapia prolific's reproduction in aquaculture 8 marks
2. Discuss three techniques used to evaluate and locate fish stock in aquatic ecosystem 6 marks
3. Discuss five principles in fishing gear designs and fish capture 6 marks

QUESTION FIVE

1. Discuss three specific design considerations before beginning the construction of a fish pond. 6 Marks
2. Discuss three factors contributing to the growth and survival of catfish fry in aquaculture 6 marks
3. Explain the benefit of electronic monitoring assessment of fish stock in an ecosystem 4 mark
4. Discuss the importance of fish stock assessment in Lake Naivasha 4 marks