JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

THRID YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANIMAL SCIENCE

2023/2024 ACADEMIC YEAR

REGULAR

COURSE CODE: AAS   3326:

COURSE TITLE: FISH FARMING AND PRODUCTION

EXAM VENUE: **STREAM: BSc. (Soil Science)**

DATE: **EXAM SESSION:**

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and Any Other TWO Questions.

QUESTION ONE – 30 MARKS

a. Define the following terms.

I.	Aquaculture	1 Mark
II.	Mariculture	1 Mark
III.	Algaculture	1 Mark
IV.	Hybridization	1 Mark
V.	Spawning	1 Marks

b. Differentiate the following terms.

I.	Oviparity and Ovoviviparity	1.5 Marks
II.	Protandric and Protogynous	1.5 Marks
III.	Anadromous and Catadromous	1.5 Marks
IV.	Toe and Freeboards	1.5 Marks
V.	Abrasion and Exophthalmos	1.5 Marks

c. Briefly explain the impacts of high ammonia levels in aquaculture.   3 Marks

d. Explain three factors influencing fish feed intake.   2 Marks

e. Explain three types of fish reproduction in aquaculture.   2 Marks

f. Describe the criteria used in the selection of *Clarius gariepinus* females' brooder. 3 Marks

g. Briefly describe the procedure for preparing fish hormonal sex reversal diets.   3 Marks

h. Discuss factors to consider in site selection of trout farming.   3 Marks

i. Discuss three effects of shallow and deeper ponds on fish production.   6 Marks

SECTION B

ANSWER TWO QUESTIONS (40 MARKS)

QUESTION TWO

a) Discuss four specific design considerations before beginning the construction of a fish pond.   8 Marks

b) Nile tilapia (*Oreochromis niloticus*) is the most farmed species in Kenya. Discuss. 6 Marks

c) Discuss factors affecting responses of organic fertilizers application in earthen ponds

QUESTION THREE

a) Explain four basic procedures used in the final processing of fish products   8 Marks

b) Discuss four fish health diagnostic features in aquaculture   6 Marks

c) Explain three vital roles of the aquaculture sector in Kenya   8 Marks

QUESTION FOUR

a) Illustrate and discuss four major external features used in finfish identification   8 Marks

b) Describe four Prevention measures of drug resistance in the treatment of aquatic organisms

8 Marks

c) Discuss the importance of aquaculture sustainability in achieving Sustainable Development Goals (SDGs).   4 Marks

QUESTION FIVE

a) Discuss three managerial practices that help to prevent fish diseases in aquaculture

6 Marks

b) Discuss the process of artificial Hypophysation of the *Clarias gariepinus* in aquaculture.

8 Marks

c) Discuss five importance of lime application in aquaculture.   6 Marks