



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 0201: FISH NUTRITION

STREAM: Y2 S1

TIME: 2 HOURS

DAY: THURSDAY, 12:00 P.M – 2:00P.M

DATE: 15/12/2022

INSTRUCTIONS:

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

SECTION A:

40 MARKS

- Distinguish the following terms as used in fish nutrition
 - Trace and Major elements (2 marks)
 - Non- essential and essential amino acids (2 marks)
 - Saturated and unsaturated fatty acids (2 marks)
 - Complete and supplemental diet (2 marks)
- Outline the functions of minerals in fish (5 marks)
- Using a diagram, outline the energy flow in fish (5marks)
- Outline factors that a fish farmer should consider when formulating fish feeds (5 marks)

5. Feeding of fish in their aquatic environment is not the same as feeding terrestrial animals. Discuss (3 marks)
6. Write short notes on the control and management of aflatoxin in fish feeds (5 marks)
7. Mr. Ombuna wants to formulate a diet with 40% crude protein using the following ingredients. Using the Pearson's square method, show how Mr. Ombuna will prepare 50 kg of the diet (8 marks)

Ingredients	Crude protein (%)
Rice bran	8.2
Fish meal	52.7
Maize bran	10.2
Soybean	44.2

SECTION B (30 MARKS)

8. Discuss the advantages and disadvantages of the commonly used fish feeding methods in aquaculture (15 marks)
9. Discuss the major categories of fish nutrients and their functions in the fish body (15 marks)
10.
 - a) Giving examples, differentiate between natural and artificial foods (7 marks)
 - b) Discuss the major factors that influence feeding in fish (8 marks)