



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 0204: ICHTHYOLOGY

STREAM: Y2 S1

TIME: 2 HOURS

DAY: TUESDAY, 9:00 A.M – 11:00 A.M

DATE: 06/12/2022

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

1. Discuss the challenges of oxygen extraction from water by fishes in marine tropical waters (4 marks)
2. (a) What are the challenges in fish classification? (2 marks)
(b) Describe the types of muscles in fish (4 marks)
3. Describe how continuous movement of water across the gills in fishes is accomplished (4 marks)
4. Explain the difference between these terms:
 - (a) Meiosis and mitosis
 - (b) Obligate and facultative air breathers
 - (c) Sexual and asexual reproduction
 - (d) Extinct and extant fishes
 - (e) Operculum and gill slit (10 marks)

5. Discuss the reasons for high fish diversity in fresh waters despite the small proportion of the ecosystems compared to marine waters (2 marks)
6. Discuss, with examples, the different types of taxonomic characters (6 marks)
7. Describe the relationship between the gut length and type of diet of fishes (4 marks)
8. Which are the paired fins in higher fishes? (4 marks)

SECTION B

9. Discuss the different types of breathing in fishes (15 marks)
10. Describe the various types of migration patterns in fishes (15 marks)
11. Discuss reproduction in higher fishes (15 marks)