



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE ZOOLOGY
SECOND SEMESTER 2021/2022
(FEBRUARY-JUNE, 2022)

ZOOL 103: VERTEBRATE ZOOLOGY

STREAM: Y1 S2

TIME: 2 HOURS

DAY: TUESDAY, 12:00 PM – 2:00 PM

DATE: 24/05/2022

INSTRUCTIONS:

- 1. Do not write anything on this question paper.***
- 2. Answer all questions in section A and any TWO in section B.***

SECTION A (40 Marks)

1. Write the general classification of mammal to Subclass and Infraclass levels and explain each. (5marks)
2. Examine the abilities that arose with the emergence of Jaws in vertebrates. (6 marks)
3. Briefly discuss how a fish in motion use fins for control in water in the basic three directions (5 marks)
4. State the major differences between Cartilaginous Fish and bony fish. (7 marks)
5. Explain the major adaptations that vertebrates employed in successful invasion of land. (5marks)
6. Briefly explain the five main mammalian features. (5 marks)
7. Briefly elaborate the properties of an ideal vaccine. (7 marks)

SECTION B (30 Marks)

1. a) Classify Pylum Chordata to Sub Phylum level (4marks)
- b.) With the aid of a well labeled diagram illustrate bodyOutlineofChordates.
(5 marks)
- c.) Discuss evidences that Cephalochordates evolved from annelids and arthropods
 or from echinoderms (6marks)
2. Discuss in details the various tail types of fishes. (15 marks)
3. Discuss the progression of vertebrate evolution beginning with **Jawless Fish**
(Agnatha) (15 marks)