



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF THE
DEGREE OF BACHELOR OF SCIENCE BIOCHEMISTRY
FIRST SEMESTER 2022/2023
[SEPTEMBER-DECEMBER, 2022]

ZOOL 210: ECOLOGY

STREAM: Y2S1

TIME: 2 HOURS

DAY: TUESDAY, 12:00 – 2:00 PM

DATE: 20/12/2022

INSTRUCTIONS

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

SECTION A

QUESTION ONE

- Explain metapopulation concept. (4 marks)
- Describe the uses of territories. (4 marks)
- Contrast resource partitioning from competitive exclusion principle. (4 marks)
- Explain the concept of parasitism as one way of organism interaction. (4 marks)
- Discuss the trophic structure of a community. (4 marks)
- Describe foraging theory concept. (4 marks)
- Explain the effects of herbivory on plant fitness. (4 marks)
- Describe the ways in which wind influences plant distribution. (4 marks)
- Discuss the functional response in predation. (4 marks)

- j. Explain the importance of the study of population to ecologists. (4 marks)

SECTION B

QUESTION TWO

- a. Discuss how the level of tolerance of an organism affects its survival in different environmental condition. (5 marks)
- b. Describe the importance of the four seasons in an organism habitat. (5 marks)
- c. Explain this connotation “fitness is more than numbers”. (5 marks)

QUESTION THREE

- a. Describe the characteristics of the tundra biome. (5 marks)
- b. Describe the adaptation of the tundra animals. (5 marks)
- c. Explain the adaptation of the desert animals. (5 marks)

QUESTION FOUR

Discuss the survivorship curves of organisms in its entire lifespan. (15 marks)