CHUKA   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR SCIENCE IN WILDLIFE ENTERPRISE AND MANAGEMENT

WIEM 311: WILDLIFE POPULATION DYNAMICS

STREAMS: WIEM Y3S1   **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 4/12/2019   **11.30 A.M – 1.30 P.M**

 INSTRUCTIONS
Answer all questions in section A (30 marks) and any two in section B (40 marks)
Do not on the question paper

SECTION A (30 MARKS)

1.   Define the following terms;

        (a) Population   [2 marks]

        (b) Population ecology   [2 marks]

        (c) Ecology equivalence   [2 marks]

2.   (a) Briefly describe two type of life tablets.   [2 marks]

        (b) List the types of data used in determining ecological life tablets.   [3 marks]

3.   Explain four assumptions in testing the logistic growth curve.   [4 marks]

4.   (a) Distinguish between numerical and functional response as used in predation models.

                                                              [2 marks]

        (b) Using appropriate examples, state three methods of prey capture used by predators.

                                                              [3 marks]

5.   Explain the source –sink dynamics with regard to habitat components.   [5 marks]

6.   Briefly elaborate on the various navigation skills that enable vertebrate migration.

[5

marks]

SECTION B 40 MARKS

7.   Calculate the increase in the density of a population of ten waterbucks from the first to the tenth generation given that B=0.011   Neg = 100

(a) There is no time lag in population growth.   [8 marks]

(b) There is a time lag in population growth   [8 marks]

(c) Plot and compare the growth cloves for the two populations.   [4 marks]

8.   Using appropriate illustrations, discuss the effects of competition on wildlife population growth.   [20 marks]

9.   Discuss the implication of an organism's size on bionomics strategies.   [20 marks]