(5)

(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER
MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIO-RESOURCE CONSERVATION AND MANAGEMENT

COURSE CODE: **SZL 324**
COURSE TITLE: **THEORETICAL ECOLOGY**

DATE: Monday 1st February, 2021 **TIME:** 2:00 – 4:00 p.m.

INSTRUCTIONS TO CANDIDATES
Answer question **ONE [1]** and **ANY** other TWO **[2]** questions
TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

KIBU observes ZERO tolerance to examination cheating

(5)

1. [a] Account for the **absence of species** from a habitat [4mkss]
[b] Tabulate the effects of: [6mks]
[i] Competition
[ii] Co-operation
[iii] Parasitism
[c] Illustrate the **sequence** in which components of an ecosystem operate [4mks]
[d] Describe how **carbon circulates** in an ecosystem [6mks]
[e] Briefly explain how Individuals of population can be **spaced** [6mks]
[f] Define: [i] Fecundity [ii] Natality [iii] Co-evolution [iv] Biome [4mks]

2. Discuss the diversity **indices** of organisms in an ecesystem [20mks]

3. a) Define **co-existence** [2mks]
b) When does **co-existence** occur? [4mks]
c) Depict the **original value** "0.66 KJ energy found in the member number five of a food chain" [4mks]
d) How are the aquatic animals **adapted** to fresh water habitats [10mks]

4. Describe the **Nitrogen cycle** [20mks]

5 [a] State **two theories** of thermodynamics [2mks]
[b] Discuss the role of **biotic factors** in determining the abundance animals in an ecosystem [18 mks]