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EMBU UNIVERSITY COLLEGE
(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)

SECOND SEMESTER EXAMINATIONS 2013/2014

SECOND YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
BIOLOGY AND BACHELOR OF SCIENCE MICROBIOLOGY AND
BIOTECHNOLOGY

SZL 103: FUNDAMENTALS OF ECOLOGY

DATE: APRIL 7, 2014

TIME: 8.30 - 10.30 AM

INSTRUCTIONS:

ANSWER ANY TEN (10) QUESTIONS (7 MARKS EACH)

1. Explain seven (7) factors that influence of density-dependent population growth
2. Differentiate between Autotrophs and heterotrophs
3. Elucidate the differences between k-selected and r-selected life traits
4. Explain the methods used to estimate survival rates in a population
5. Explain why assumptions of the logistic model of population growth on carrying capacity may not hold true for some populations.
6. Explain the factors that are responsible for soil formation and state two soil functions
7. Briefly discuss N and P cycling in an ecosystem
8. Describe Primary productivity and Secondary productivity
9. Explain primary and secondary ecological succession
10. Explain the types of refuges available for prey to escape predation
11. Describe the chemical constituents of the atmosphere
12. Explain 4 exploitative interaction and 3 competitive interaction

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