



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

**FIRST YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DEGREE OF MASTER OF SCIENCE IN
BOTANY (MICROBIOLOGY AND PLANT PATHOLOGY)**

MAIN CAMPUS

SBT 816: PLANT PRODUCTION QUESTION

Date: 26th February, 2018

Time: 3.30 - 11.30am

INSTRUCTIONS:

- Answer ALL Questions in Section A and any other THREE from Section B.



D.

SECTION A: ANSWER ALL QUESTIONS IN SECTION A (30 MARKS)

1. Discuss two parameters used in determining energy flow relations within ecosystems showing the difficulties encountered in the measurements. (15marks).
2. Discuss diversity of ways in which stable isotopes inform the present and future ecological changes during energy transfer in a variety of ecological systems and trophic levels. (15marks)

SECTION B: Answer THREE Selected Essay Questions (30marks)

1. Discuss the emerging issues and new frontiers in the use of isotope in the energy transfer studies. (10marks)
2. How is primary productivity measured in the terrestrial and aquatic ecosystems? (10marks)
3. Using examples, discuss two main limiting factors affecting net productivity in Lake Victoria. (10marks)
4. Compare and contrast the limitations of the field experiments and laboratory experiments data collection. (10marks)
5. Discuss the dual function of RUBISCO molecule during photosynthesis. (10marks)